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JOHNSTONS'

Dental Miscellany,

A MONTHLY JOURNAL OF

*AMERICAN AND FOREIGN DENTAL, SURGICAL, CHEMICAL  
AND MECHANICAL LITERATURE.*

VOLUME VIII., 1881.

NEW YORK :  
JOHNSTON BROTHERS,  
1260 BROADWAY.





# CONTENTS—VOL. VIII.

	PAGE
A Singular Case. By Dr. A. M. Ross.....	337; see 409
Abscess, Parotid, Caused by a Fragment of Hay.....	228
Address to the Toothache.....	78
Advertising Dentists.....	79
Advice Asked For.....	318
Æsthetic Dentistry.....	312
Alabama Dental Association.....	232, 391, 425
"    Dentists.....	425
Alleged Bogus Dental Diplomas.....	62
Alumni of Ohio College.....	225
Amateur Dentistry.....	64
American Academy of Dental Science.....	46, 296, 469
"    Dental Association.....	7, 50, 300, 310, 341, 372, 410, 451
"    Convention.....	275
"    Dentists Abroad.....	392
"    Medical Association.....	227
Anæsthesia, Surgical. Translated by Dr. A. N. Roussell.....	91
Ancient Dentistry.....	80
Anti-Mallet.....	394
"    Successful Re-implantation. By Dr. G. O. Shafer.....	339
Antral Disease, etc. By Dr. J. B. Davenport.....	165
Artistic Dentistry.....	159
Association of Surgeons Practising Dentistry (Eng.).....	79
Atkinson, Dr., and a Universal Language.....	434
Baltimore College of Dental Surgery.....	147
Birds, Extinct Toothed.....	70
Bonwill's Method of Restoring Crowns. By Dr. E. A. Stebbins.....	401
Book Notices.....	77, 118, 145, 197, 280, 319, 397
Boston Dental College Alumni.....	130
Brown Bread and the Teeth.....	271
California Dental College.....	468
Capping Exposed Pulp. By Dr. M. A. Webb.....	172
Case, A Singular. By Dr. A. M. Ross.....	337; see 409
"    of Antral Disease, etc. By Dr. J. B. Davenport.....	165
"    of Successful Reimplantation.....	479
Cases and Incidents in Office Practice.....	6, 14, 98, 135, 174, 207, 209, 218, 260, 308
Celluloid Company, Action Against.....	30
Chemical Abrasion. By Dr. Davenport.....	445
"    and Physical Effects of Fillings on Teeth. By Prof. C. Mayr.....	121; see 239, 273, 319, 364, 449
Civilization, its Effect on Teeth. By Dr. T. Fry.....	161
"    "    "    "    N. W. Kingsley.....	242; see 271
Cogswell Dental College Trouble.....	41, 131, 257
College, Dental, Philadelphia.....	117, 314
"    Delavan.....	369; see 62
"    of Dental Surgery, Baltimore.....	147
"    "    "    Ohio.....	146
"    "    "    Pa.....	115
"    of Dentistry, N. Y.....	114
Colleges, Our Dental.....	246
Coming Dentist, The.....	470
Comments on Modern Dentistry. By Dr. G. W. Weld.....	281
"    "    "    "    J. P. Geran.....	369; see 393
Common Sense in Dental Practice.....	261
"    "    What Is It?.....	272
Connecticut Valley Dental Association.....	105, 188, 390, 467
Contour Restoration, etc. By Dr. E. P. Brown.....	361

	PAGE.
Contour Restoration, etc. By Dr. M. H. Webb.....	321
Correspondents, To.....	105, 158, 196
Cork Teeth.....	200
Correction, A.....	398
Cremation, A Book On.....	397
Criticism, A.....	340, 436; see 450
"    A Word On.....	198
Cummings Patent, The.....	39, 78; see 269
Cutting a Third Set of Teeth.....	360
Dead Teeth, The Roots of, etc. By Dr. F. L. Harris.....	171
Death from Swallowing Artificial Teeth.....	479
Deafness.....	435
Defective Teeth, Myopia and.....	399
Delavan College.....	314, 369; see 62
Dental Amenities.....	160
"    Association of the United States.....	268, 351, 384, 420, 459
"    Census.....	39, 61
"    Colleges, Our.....	246
"    Education. By Dr. J. D. Clark.....	47
"    Engines in Aural Surgery.....	80
"    Facts for Children.....	234
"    Journalism, Ethics of.....	354
"    Journal, A New.....	79
"    Journals and Writers. By Dr. W. H. Robinson.....	86; see 106, 199, 293
"    Law in New York State.....	276
"    Organizations. By Dr. G. A. Mills.....	2
"    Politics in England.....	34, 148
"    Societies, A Hint to.....	269, 353
"    Society of the State of New York.....	106, 157, 215, 233, 260, 305
Dentist, The, Is He a Plunderer? By Dr. J. T. Codman.....	330
"    The Rev. Mr. Pentecost's.....	320
Dentistry, Aesthetic.....	312
"    Ancient.....	80
"    and the Press.....	234
"    English.....	184
"    in Albany.....	233
"    "    Persia.....	356
"    "    Polynesia.....	280
"    Magnetism in. By "T. S. H.".....	328; see 355
"    Modern, Comments on. By Dr. G. W. Weld.....	281
"    "    "    J. P. Geran.....	369; see 393
"    Ought it to be Regulated by Legislation?—A Reply. By "B.".....	406
"    The Political Economy of. By "B.".....	81
Dentists' Duties.....	473
"    for the Army and Navy.....	477
"    Leisure.....	120
Diabolical Dentistry.....	159
Diploma, Dental, Alleged Bogus.....	62; see 314, 369
Discontinuance of the MISCELLANY.....	441
Division of Work.....	199
Divorce, A, Shall it be Obtained?.....	352
Domestic Motors.....	66
Duty of Dentists, A.....	200, 473
Editorial Notes.....	39, 79, 119, 159, 198, 233, 269, 310, 352, 392, 433, 470
Effects of Civilization, etc., on the Teeth. By Dr. T. Fry.....	161
Elements, Ultimate, of the Teeth, etc. By Dr. S. B. Palmer.....	289
Engine, Dental, in Aural Surgery.....	80
English Dental Politics.....	34, 148
"    Dentistry.....	184, 471
English Letters.....	34, 108, 148, 190, 254, 403
Ethics of Dental Journalism.....	354



	PAGE.
Exposed Pulp. By Dr. M. A. Webb.....	172
Extinct Toothed Birds.....	70
Faculty of Physicians and Surgeons of Glasgow.....	230
Fashion in Deformity.....	229
Fatality in a Dentist's Office. By Dr. Kelsey.....	448
Fifth District Dental Society of New York.....	177
Fillings, Chemical Effects on, etc. By Prof. A. Mayr, 121; see 239, 273, 319, 364, 449	
Fireside Amusement, A.....	399
First District Dental Society of New York...13, 54, 96, 134, 174, 208, 268, 439, 464	
Fling at American Dentistry.....	474
Foil, Non-Cohesive <i>versus</i> Cohesive. By Dr. T. F. Chupein.....	201
Georgia State Dental Society.....	142
Glossitis, the Case in September MISCELLANY. By "M.".....	409
Goodyear Patent, The.....269; see 39, 78	
Harvard Odontological Society.....	299
Hint, A, to Dental Societies.....269, 353	
Histology. By Dr. W. H. Atkinson.....	442
International Medical Congress.....	143, 426
Is the Human Structure Deteriorating?.....120, 235	
Kansas State Dental Association.....	226
Ladies with Caustic Pens.....	315
Leisure, Dentists'.....	120
Letter from Mr. Fletcher.....	449
Magnetism in Dentistry. By "T. S. H.".....328; see 355	
Massachusetts Dental Society.....59, 309	
Medical and Dental Professions, The.....40	
" Profession and Manufacturing Pharmacists.....187	
Medico-Dental Jurisprudence. By Dr. J. H. Warner.....	168
Michigan, University of.....	195
Modern Dentistry, Comments on. By Dr. G. W. Weld.....281	
" " " " J. P. Geran.....369; see 393	
More Ignorance.....	472
Motors, Domestic.....	66
Myopia and Defective Teeth.....	399
Naboli.....	39
" Fighting Against. By "X.".....73	
Narrow Escape, A.....	298
National Dental Association.....See Dental Association of the United States.	
Nature's Work.....	435
Nebraska State Dental Society.....	348
Non-Cohesive <i>versus</i> Cohesive Foil. By Dr. T. F. Chupein.....	201
Notes.....	280
New Dental Journal, A.....	79
" Jersey Dental Association.....145	
" Year, The.....1	
" York College of Dentistry.....114	
" " Dental Society.....106, 157, 215, 233, 260, 305	
" " State Dental Law.....189, 276	
Newspaper Man's Toothache.....	159
Obituary.....38, 53, 77, 104	
Odontological Society of Great Britain.....16, 99, 179, 221, 264, 350, 388	
Ohio College of Dental Surgery.....	146
" Alumni of.....225	
Ought Dentistry to be Regulated by Legislation?—A Reply. By "B."...406	
Our Dental Colleges.....	246
Pandering to the Medical Profession. By Dr. A. N. Roussel.....4; see 40	
Parotid Abscess Caused by a Fragment of Hay.....	228
Peeps Into the Magazines...35, 74, 111, 154, 191, 236, 277, 316, 357, 395, 437, 474	
Pennsylvania College of Dental Surgery.....	115
" University of (Dental Department). ....147, 157	
Permanent Set of Teeth, A.....	119

	PAGE.
Persia, Dentistry in.....	356
Philadelphia Dental College.....	117
Plunderer, the Dentist, is He A? By Dr. J. T. Codman.....	330
Political Economy of Dentistry. By "B.".....	81
Press, The, and Dentistry.....	234
Professional Amenities.....	39
Prof. Mayr and Mr. Fletcher.....	239, 273, 319, 364, 449
Proprietary Copyrighted Medicines.....	205
Readers, To Our.....	79, 396
Recognition of Dentistry by the Medical Profession.....	403, 433
Reliefs to Dullness.....	355
Remarks upon Bonwill's Method of Restoring Crowns. By Dr. E. A. Stebbins.....	401
Re-implantation, Anti-Successful. By Dr. G. O. Shafer.....	339
Removal of a Tumor. By Dr. W. E. Pinkham.....	297
Reply to Dr. Park's Criticism. By Dr. Webb.....	450
Restoration of Contour. By Dr. M. H. Webb.....	311
"    "    of the Superior Central Incisor. By Dr. E. P. Brown.....	361
Retrograding Influences.....	393; see 281, 369
Rev. Mr. Pentecost's Dentist.....	320
Royal College of Surgeons (Edinboro').....	196
"    "    (Ireland).....	231
Science in Dentistry.....	198
Shall a Divorce be Obtained?.....	352
She did not Swallow her Teeth.....	480
Singular Case, A. By Dr. A. M. Ross.....	337; see 409
Sixth District Dental Society.....	232
Societies, Dental, A Hint To.....	263, 353
Something New for Filling Roots. By Dr. F. L. Harris.....	171
South Carolina Dental Association.....	138
South-Western Dental Society.....	391
Southern Dental Association.....	189, 267
State Laws Regulating Dentistry.....	133, 189, 276
Surgical Anæsthesia. A Translation by Dr. A. N. Roussell.....	91
Swallowing False Teeth and Plate.....	440
Teeth and Bones, The Ultimate Elements of. By Dr. S. B. Palmer.....	289
"    "    Brown Bread.....	271
"    "    Civilization and its Effect On, etc. By Dr. N. W. Kingsley.....	241; see 271
"    "    "    "    "    T. Fry.....	161
"    Permanent Set, A.....	119
"    Defective, Myopia and.....	399
"    the Chemical Effects of Fillings Upon. By Prof. C. Mayr.....	121; see 239, 273, 319, 364, 449
Texas State Dental Society.....	40, 138
To Our Readers.....	79, 396
Tooth Development. By "B.".....	44
"    Story, A.....	235
Toothache, Address to.....	78
Toothed Birds, Extinct.....	70
Tumor, Removal of A. By Dr. W. E. Pinkham.....	297
Ultimate Elements of the Teeth and Bones. By Dr. S. B. Palmer.....	289
Unheroic Heroes.....	119
University of Pennsylvania (Dental Department).....	147, 157
"    Michigan.....	195
Virginia State Dental Association.....	58
Vox Populi, Vox Dei.....	313
Webb, Dr. M. H., Criticised.....	436
What is Common Sense?.....	272
What we Want.....	471
Wisconsin State Dental Society.....	349
Word of Criticism, A.....	198
Writing for Dental Journals.....	86, 106, 199, 293

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*January*, 1881.—No. 85.

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## THE NEW YEAR.

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THE traveler along life's pathway often comes to points at which he can with profit rest awhile, and review the past and glance into the future. These resting-places afford a wholesome release, if only for a moment, from the ordinary routine of our labor, and such a release is demanded by human nature. A large proportion of workers, and perhaps a still larger proportion of drones, find in their daily life a somewhat wearisome monotony ; but the commencement of a new year brings with it at least a temporary relief. We live in these days at a very rapid rate, and perhaps some of us can scarcely stop to take breath, even at the beginning of such an epoch in our lives as a new year. But there are others who can ; and the short halt does not work to their disadvantage in the long run. To look back on the past ; to take courage from past successes to new endeavors ; to profit by the warnings of past failures ; to remember the quicksands on which we have struck ; to discriminate between the results of our own blunders and accidents beyond our control ; to form good resolutions for the future—all these are mental excises which have no little value.

Dentists can, collectively, look back on the past with satisfaction ; individually, they may, if they are honest with themselves, see much in the year that has gone by which they would recall. Collectively, they cannot, perhaps, lay the flattering unction to their souls that



they have absolutely and definitely emerged from the Stygian darkness of ignorance into the fullest sunlight of knowledge : but they can congratulate each other that they have succeeded in dissipating some of that darkness, and that they are now enjoying much knowledge and truth, which is so dear to inquiring humanity, and which some dentists, at least, have been, and are, so ardently striving to obtain more of. There is much opportunity for research ahead for members of the profession. We hope that, as they scan the horizon, they will discover the indispensableness of this knowledge, and following this important discovery, that they will at once set to work to delve and labor, until that for which they seek gradually reveals itself.

### DENTAL ORGANIZATIONS.

BY DR. G. A. MILLS. READ BEFORE THE FIRST DISTRICT DENTAL SOCIETY, NEW YORK.

HAVE our organizations shown the advancing thought of the day in dental progress? No sane man will venture to say that associated effort has not marked the direct line of progress in our calling. Many of us present can distinctly discern the pathway of our growth, during the past twenty years, in active alliance with one or more associated bodies. These bodies have done very much for us. It is quite natural that there will be lapses of interest with individuals and collective bodies of men arising from various causes, and we have had continued examples of this. We can, in a hasty review, bring before our minds the organized bodies which have been actively engaged for a goodly period of time and have ceased to exist under their original titles.

The Brooklyn Dental Association at no time during its existence was second to any associate body of dentists. Its reputation was world-wide. That society was the Alma Mater to many a dentist. Many of us made our first bow before the profession in it, and it is very gratifying, as we run over the lists of the members, to find that so few have passed out of this life and that so many are more or less actively engaged in organized effort now.

The New York City Society, which held its meetings at Cooper Union, is happily cherished in the many pleasant memories centred in its history. Many familiar faces seen there are still with us, and doing more or less in their own time and in their own way, while

with some the burden of accumulated years and toils are beginning to make their mark. The present existing local societies are making history from meeting to meeting. The past is gone. The present only is ours. We have the accumulation of the products which have accrued from the past, and have, more or less, become cultured in our discriminations, so that we are able, in a greater or less degree, to make a fitting and profitable appropriation of them. Our vacation has ended, and we are again face to face with the duties of the hour. Action is the universal law of life; non-action produces disintegration. No organized body can long exist without motive power, and this can only be generated by us under the stimulating agency of high motives. This society has made a record for itself that has been noble and generous, and given an impulse second to none. I do not think that a large number of those who have attended the clinics under the munificent arrangements provided by this society have anything like a comprehensive idea as to whom they are indebted for the valuable suggestions received at these meetings. I have always, from my first associations with clinical instructions (which date back to the bountiful provisions made for them by our unflagging and never-failing co-worker, Dr. Atkinson, in these very rooms), felt their potent influence, and believe that they are capable of doing an amount of good that is incomputable. We must put the strong arm of support about this part of our work; for if this body can do no more than to sustain this branch of usefulness, its existence will not be in vain. It is gratifying that the quality of service given at these clinics does not retrograde, nor is there any decline of interest in them. I think, on the other hand, there is a decided increase manifested. It is to be regretted that there are some who say that they have tired of these gatherings of associated work; they say that it is the same hum-drum reiteration which they have heard from year to year, and coming back continually to the same place. Life's work is a repetition, line upon line, here a little and there a little; the race is not to those who fall out of the way, but to the swift. It is not a walking-match easily gone over. Could we photograph the work we have been engaged in during these years to which I have referred, we could see plainly the progress made, and note the change which has taken place. We are permitted to get a little of the retrospect of our pathway, and we can ask with pride, "Have we not advanced in methods and quality of work? Are we not larger in our manhood,

broaden in our influence, and cultivating a finer discrimination among those who solicit our services?" Could any one in attendance at the meeting of the American Dental Association, held at Boston in August (the largest and most interesting one ever held by that body), fail to discover with joy the advancement there indicated? This was not only so in the papers, but in the discussions. At that meeting it was very apparent that we have ceased to waste time over the hackneyed subject of recognition by the medical profession. With one accord it was admitted that we must educate ourselves in the general sciences allied to the healing art, which embraces not only our branch, but all the rest.

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## THE PANDERING OF THE DENTAL TO THE MEDICAL PROFESSION.

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READ BEFORE THE ODONTOLOGICAL CLUB OF PHILADELPHIA BY  
A. NAPOLEON ROUSSEL, D.D.S., BROOKLYN, N. Y.

*Mr. Moderator and Gentlemen of the Odontological Club:* The absurd pandering to the medical profession by dentists will prove most fatal to the elevation and advancement of their art, and the defeat of the very object in view will be the insipid residue of their parasitical sycophancy. That a dentist who attaches M.D. to his name is regarded both by the dental and medical professions as being better able to fill the position of a dentist than one who is simply a D.D.S. is such an established fact that it needs no confirmation here.

But of all the unjust distinctions made, the one created by dental colleges themselves (institutions to which we must look for reform) is the most unjust. I speak of admitting graduates of medical colleges as second-course students in dentistry, and, after a course of four short months, invariably granting these pseudo-physicians the degree of D.D.S. I say invariably, because I have never heard of a case where a graduate of medicine failed to pass an examination in dentistry. How could he? "What! fail to pass so simple a thing as a dental examination! Why, sir, you forget that I am a graduate of the Grind-'em-out Medical College. Preposterous!"

Yes, gentlemen, he is a graduate in medicine; he knows nothing about dentistry. These sentences are synonymous in a majority of cases. What does this M.D., D.D.S.—this overloaded man of science—know about practical dentistry? Can he prepare a cavity properly?

Can he insert a filling properly? Can he construct an artificial denture? I ask you these questions as men that know, as men that have associated with such hybrid bunglers, and are capable of forming a correct opinion and giving an honest answer.

Occasionally you will find a dentist with the degree of M.D. who is really a first-class dentist, but nine times out of ten he took his degree of M.D. after he had received his D.D.S., and not with any idea that he would be the better dentist for it, but because it gave him prestige with the medical profession. So, gentlemen, we have this pandering indulged in by two classes: in the first instance by the faculties of dental colleges, and in the second by dentists who have been established and are doing well, satisfying their patrons and making reputation for themselves. But suddenly "a change comes o'er the spirit of their dreams." They must be M.D.'s. The man who writes M.D., L.L.D., etc., etc., after their names always treats them coolly—asks them how the dental business is? all of which he would not do if these poor deluded dentists were M.D.'s. So off they go to college, attend two full courses of lectures, neglect their practice, lose patients (to say nothing of the expense), for the sake of becoming M.D.'s.

Now, to take up the case of the student just fresh from the medical college. He comes to the dental college with an ineradicable impression that his knowledge of medicine is sufficient to carry him through; consequently, slights his work and the lectures, when he really cannot afford to lose one second of time of the entire four months; for it is too short for him even to get sufficient dental knowledge to warrant him in presenting himself as a candidate. Of course he knows something about physiology, anatomy and chemistry, but that is not enough, as the practical chairs of operative and mechanical dentistry control a successful examination. But, humiliating to record, these M.D. fledgelings get through without any trouble. All this is wrong; this vile pandering must be stopped, if the elevation of dentistry is the object of dentists.

In what light do you suppose that a respectable medical practitioner would hold one of these hybrid, fawning, cringing dental Uriah Heaps, forever dangling after a pair of coat-tails, which to his morbid imagination represented the two magic letters, M.D.? While I regard the knowledge acquired in a medical school of value to the practitioner of dentistry, I would not on that account exempt him from a single lecture of the dental curriculum.



## A CASE IN PRACTICE.

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BY DR. C. T. STOCKWELL, SPRINGFIELD, MASS

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A LADY, about thirty-five years of age, called on me recently to have a badly decalcified second left inferior molar tooth filled. The pulp was exposed on the buccal surface.

The patient had suffered much from this and another tooth that had just previously been removed; and also had been caring for a sick neighbor. She was considerably exhausted and worn out, manifesting a good deal of nervous excitability. I capped the pulp and filled the cavity; but, to my surprise, an unusual amount of pain followed, to relieve which I took down my bottle of chloroform, and, moistening my fingers, passed them down the side of the face two or three times. But as the pain did not entirely subside, I suggested that she take a few inhalations. She accordingly took the bottle and inhaled directly from it, moderately, twice—it is barely possible that she did so three times—when I noticed a wavering. I seized the bottle and she immediately sank back into the chair in a completely unconscious state. Grasping her wrist, I failed to discover the least indication of the heart's action. Respiration ceased. The face assumed, almost instantly, a slightly flushed, but intensely asphyxiated, expression; the eyes stared wide open and the pupils were very largely dilated. To say that, to my mind at least, the affairs of this world had suddenly assumed a most earnest aspect, is putting it mildly. There being a physician's office at the next door on the same floor, I stepped to it, but he was out. Not daring to waste another second in summoning help, I proceeded alone. My efforts soon resulted in a slight gasp, when about a thousand tons appeared to roll off my shoulders. With the aid of nitrate of amyl the heart's action soon became comparatively normal, and she gradually recovered a regular respiration and complete consciousness.

Now, in my judgment, this was a case that possessed a peculiar idiosyncrasy, or extreme sensibility to the influence of chloroform; and that there was a complete paralyzation of the sympathetic system of nerves produced by the two or three inhalations of the chloroform. In other words, she was dead, and nothing but the most immediate and active efforts to resuscitate saved her from the corner. The case has several self-evident morals.

## 20TH ANNUAL SESSION

OF THE

## AMERICAN DENTAL ASSOCIATION.

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HELD AT BOSTON, AUGUST 3D, 4TH, 5TH AND 6TH, 1880.

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## FOURTH DAY—FRIDAY MORNING.

## DISCUSSION—DENTAL EDUCATION.

DR. W. W. ALLPORT, Chicago, remarked that very much had been written and said in regard to the subject of Dental Education, and to some it had become threadbare and hackneyed. As, however, correct practice must depend on proper education and training, they should never tire of expressing themselves in such a way that it will be understood by the younger members now in practice and by those about entering the profession of dentistry as a life calling. Some persons are inclined to censure dental colleges for the seemingly lax manner in which they give instruction, and for the low standard of education of those who took a full share of their benefits. But in this, as in all other subjects, it is easy to unfavorably blame and criticise a system without suggesting an improvement. While it was clear to his mind that the time has come when a change and an improved mode of instruction should be instituted, too great thanks could not be expressed for what the colleges have accomplished; but, though they should be thankful for what they had done, that was no reason why improvements should not still be made. Nothing is more necessary than a training of specialists in the dental profession. Those who are engaged in artificial dentistry should be educated in that department, and for it exclusively; and those engaged in dental or oral surgery should be medically educated in medical colleges, supplemented by special instruction in dental practice, and a diploma from a respectable medical college should be the first requisite for matriculation in a dental college. No one feels the need of such an education so much as the older practitioners. When this mode of instruction is suggested, the objections urged are that more time would be required, and it would be difficult to get young men to adopt it, and the community expects the dentists to do all that is

required in the mouth, whether it is oral surgery or artificial dentistry, and they cannot be got to go to one practitioner for one department of work and to another for another. The former objection would hold good so long as both things were taught in one institution, but let them drop artificial dentistry and devote the time to medical study in one college, and do the reverse in another. With regard to the other objection, the people must be educated in this matter—they must be taught that the greatest skill can only be obtained by those who devote their study and time to the practice of one particular subject.

Dr. H. W. MORGAN, Nashville, said, that the more he considered the proposal to divide dentistry into different branches, the more impossible it seemed to him to accomplish the object. There is so much intermixing of the two that it seemed to him to be impracticable. The mechanical branch of the profession and oral surgery are interwoven in the correction of irregularities. The dental surgeon who sets up irregular teeth should not only be able to devise in his own mind means by which he will accomplish it, but should be able to construct fixtures for the purpose. The man who understands the means by which ends can be reached, and understands the mechanical appliances he proposes to use, if he has mechanical skill, can do far better than a mechanic who does not understand the principles of dentistry. It is no more possible to separate artificial dentistry from dental surgery than medicine from the practice of dentistry. Dentists do not practice medicine, and yet cases constantly come under their care to which they are obliged to apply the medical art.

Dr. BUCKINGHAM, Philadelphia, criticised at some length the dental colleges and their mode of work; after which

Dr. C. S. STOCKTON, Newark, N. J., remarked, that there is a law in nearly every State regulating the practice of dentistry. But the education of the young men who came before the dental boards is not what it should be, and often the examiners themselves have not sufficient experience to be able to tell whether those whom they examine have as much education as is needed to make good dentists. The great trouble of the day is, that so many are entering the profession through the examining boards—getting into it in a back-door fashion, without ever seeing the inside of a college. The American Dental Association should discourage these examining boards in every possible way, and then they would do something to prevent

the acknowledgment by the law of the land as dentists men who could not write a fair letter in their mother tongue to save their lives.

Dr. T. T. MOORE, Columbia, S. C., thought that dental colleges had not received that encouragement which they deserved. Dentists should remember, too, that they were a young profession, and he would ask to what the progress they had made during the past fifty years was due if not to the dental colleges?

Dr. TEMPLETON, Pittsburg, denounced the practice which prevailed of dentists taking into their offices boys, some of them as assistants, who thought that they would like to be dentists, but who never asked themselves if they were fitly educated. He had had young men come to him seeking employment, and after he had asked them a few questions he sent them away with the suggestion that they should go to school longer. They had left him, and had soon been taken in hand by other dentists and turned out as full-blown dentists in a short time. That was not as it should be, and a reform could not be effected till all dentists refused to employ men as assistants who had not acquired the necessary education.

Dr. W. C. BARRETT, Buffalo, asked whether, because a tooth was a portion of the human anatomy, and certain men performed operations on the tooth, they therefore became medical men? Did they thereby secure any affiliation with medical men? It is all very well for dentists to flatter themselves that they are medical men, and belong to the great profession of healers—it is pleasing, perhaps—but he could not honestly admit that they are justified in coming to such a conclusion. They are not acknowledged as medical men by the public—they are not acknowledged by medical societies. Should they be acknowledged as medical men? He would remind them that there is but one door which admitted a man to acknowledgment as a doctor of medicine, and that is a medical diploma. A student can become a medical man only through the doors of a medical college. Any affiliation he (the speaker) might have with medical men, he claimed, not because he was practicing a specialty in medicine, but because he was a medical man first. While it is quite true that there is a close connection between the practice of medicine and dentistry, yet a practitioner of the latter is not necessarily a medical man. A shoemaker who takes into consideration the anatomy of the human foot cannot thereby claim any affiliation with those who make the anatomy of the human frame their sole study. Dentists must take high ground in this matter. It is no use for them



to attempt to go sneaking into a side-door. A student must, to begin with, have a liberal general education. He must be thoroughly familiar with language before he can understand its force in the use of terms which a medical man constantly meets with. Then, if he wants to practice such a specialty in medicine as dentistry—for as such it should be regarded—let him become a medical man, first going through a full curriculum of medical study. He should not study a mere section of anatomy, but anatomy generally, and so with all the branches—chemistry, physiology, and all that is taught. The dental colleges have done a wonderful work, and he honored them for it; but they are not what they should be, nor what they will be. The same might be said in regard to medical and literary colleges—they are rising step by step, and, as he gazed at the horizon, he saw the light of their future breaking into view. In that future lay possibilities and capabilities which years ago were never dreamed of. Twenty years ago—fifty years ago—who would have thought the dentistry would ever occupy the place it does to-day? Had the summit been reached? No, indeed; they were only just seeing the breaking sunlight—they were just catching the glimmering of the rising sun—and the time would come when the sun would burst on the world in meridian splendor.

He believed firmly that the future of dental education is closely connected with that of medicine, and that the time would come when dentistry would be taught in medical colleges. But dentistry would then be regarded as one branch of a liberal education, and eventually there will be brought under one roof, or into one college, all the means of a broad education to fit a man for whatever he proposes to do. He would be able to go to a class where anatomy is thoroughly taught, where a man will preside who can give his whole life and time to the teaching of anatomy. So with therapeutics and materia medica. The student will go through the medical course and graduate as a medical man, after which he can super-add to his knowledge his specialty of dentistry. Such is a sketch of what is in the future. He could not say how quickly it would come; but the future of dentistry lies in a complete, full, medical education, and, until the time comes when such is looked on as a necessity, dental education has not reached its highest altitude.

Dr. I. J. WETHERBEE, Boston, thought the remarks that had been made ignored the thorough teaching in dental schools, of anatomy and physiology which the students receive. The whole drift of the

argument had been an ignoring of the fact, also an entire ignoring of the thorough and practical teaching in the principles and practice of surgery which have been introduced into dental colleges, as though these things were taught only in medical schools. He believed that the branches of surgical practice, therapeutics and pathology are as thoroughly and as efficiently taught in dental as in medical colleges. If therapeutics received proper attention in dental colleges, did it not cover sufficient of medicine to enable a man to prescribe intelligently and successfully for certain conditions of the system indicated by certain symptoms? He claimed for these colleges what is their due. Furthermore, every intelligent medical man in the country will acknowledge that the practice of medicine is empirical. The highest and best-educated men declare it to be so, and if they turn back carefully the roll of time and note carefully the advancements and the retrogressions that have been made, they will become fully assured that the practice of medicine is empirical. A few years ago the Massachusetts State Society established a rule that no one should become a member of the society unless he had a degree. For some reason that position was abandoned, and everybody was allowed to enter who had a good moral character. The abandonment of the position struck a blow against progress in dentistry, and the regulation as it at present stands is a hindrance to the work. But the colleges should have credit accorded them for what they had done. The Boston college placed itself in a line of progress, and only existed to make better men and better dentists. The students must have a good moral character, and if they do not maintain that character, they are advised to leave the college, and one or two had so left. He repeated—give to the colleges their due. Unfortunately, there were always surrounding them a number of Mrs. Grundys—those who were continually hungering and thirsting after the leeks and onions of empiricism.

The section was then passed.

THE UNWRITTEN LAW OF DENTAL ETHICS. BY DR. C. A.  
MARVIN, BROOKLYN.

The following is an abstract of a paper which was then read by special request: Almost every dental society has its code of ethics, more or less elaborate, more or less stringent. \* \* \* Ethics is a system of morals, and, strange as it may seem, it is deemed important to put into words the rules which should govern honorable

gentlemen in their intercourse with each other and with the public. It is not considered safe, let it be observed, to leave such intercourse to be governed by the natural instincts of the gentlemen themselves. \* \* \*

The fundamental principle of our code of ethics is a courteous regard on the part of every dentist for the rights, the feelings, the reputation and the interest of every other dentist; also for the dignity of the dentist himself. Anything that is in any way adverse to this principle is an infraction of ethics, whether the code specifies the particular act or not. \* \* \*

The spirit of ethics is very wide-reaching in extent, and capable, if truly appreciated and obeyed, of working a revolution of no insignificant dimensions in dental action. It has been noticed forcibly, that in our profession, as in others of a scientific character, there is not an entire want of superciliousness on the part of advanced men toward men of less attainment. Neither is there any excess of the disposition to encourage young practitioners, timid speakers, earnest but not yet profound thinkers. \* \* \* If the timid brother's feelings are wounded and his voice silenced, his ethical rights have been infringed, and the principle which should govern professional intercourse has been as truly violated as though some written article of the adopted code was broken. \* \* \* The phase of ethics which we are considering has two sides, and, to be fair, we must look at both. If it is unethical to criticise rudely the diffident brother, who is doing the best he can, it is quite as much so for any one, strong or weak, bold or diffident, to occupy time when he has nothing to say, or compel gentlemen to listen while he utters, in a hesitating and stumbling manner, crude, half-formed opinions which distress but do not edify his hearers. \* \* \*

The more this subject of ethics is pondered, the more clearly will it be seen to stretch itself along the course of professional action, touching it again and again until to the earnest gaze it shall assume the dignity and majesty of law. \* \* \* In a word, the dentist's duty to his profession is to maintain its dignity, to increase its efficiency, to make it honorable in the eyes of men. Any course of action which will diminish public confidence in dentistry as a profession is a breach of duty, and every breach of duty is an infraction of the principle of ethics. Hence, poor practice, imperfect operations, unskillful treatment, wasting of time, whether resulting from carelessness or ignorance, are unethical.

It must not be supposed that because our patients are not dentists they are unable to weigh our conversation and to decide very quickly whether we are talking sense or nonsense, intelligently or at random. A free use of scientific terms will not pass for well-expressed ideas, nor redound half so much to the credit of the speaker as the simple language which conveys some useful and appreciable thought. What I am urging is the creation of a goal toward which we shall press. In our personal relations this goal is the cultivation of mutual consideration; in professional work, the highest good of those committed to our care; in professional conversation, clear expression of positive ideas; in professional life, maintenance of personal honor; in professional study, securing of valuable information; in social relations, the devotion of one's best energies to the promotion of the general good; in the labor of scientific research, the exercise of the calm, persistent, wise discrimination to dig and test, to gather and sift, so that golden grain and not weightless chaff may be the product. Such is the privilege, such the duty, of every intelligent man, as a man, of every faithful dentist, as a dentist; and the more steadfastly, the more vigorously, the more religiously he exercises this privilege and performs this duty, the more nearly will his life accord with the requirements and the spirit of the great unwritten law of dental ethics.

*(To be concluded.)*

## FIRST DISTRICT DENTAL SOCIETY.

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HELD AT THE OFFICE OF DR. W. H. ALLEN, 18 WEST ELEVENTH STREET, NEW YORK, DECEMBER 7TH.

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THE meeting was called to order by the President, Dr. Clowes. There was a good attendance of members.

### THE CLINIC.

Dr. C. F. W. BÖDECKER said there had been a very successful clinic and plenty of visitors—between seventy-five and eighty. At a mallet practice, in which gold was introduced into glass tubes, the result was not altogether as satisfactory as it might have been, for most of the tubes broke before the operators finished.

Dr. F. H. LEE presented an improved laboratory burner. The jet was curved, and underneath it was a small table for the purpose of catching the wax.



## INCIDENTS OF OFFICE PRACTICE.

Dr. W. H. ATKINSON said that a patient had just called on him who had two central incisors filled with No. 120 gold in 1868. The right one is standing without leakage, and is as complete and strong as it can be with the pulp out. The left one became weak, the left proximal face gave way, it became loosened and was taken out. He (Dr. Atkinson) wished to silence the ignorance which was heard at dental meetings very frequently, to the effect that there is no record of contour filling of cohesive gold lasting as those of soft gold last. He knew of fillings that were put in twenty-five years ago, and only recently he saw a person just returned from Europe, after an absence of two years, who had a number of teeth filled with cohesive gold ten years ago and they are now as good as ever.

Dr. W. T. LA ROCHE said that he had just had a patient who had a tooth filled a year ago with phosphate. The tooth looked opaque, and he had frequently noticed teeth look like it when filled with phosphate. He should be glad to hear an expression of opinion as to the effect of phosphate on the teeth.

Dr. BÖDECKER remarked that he purchased a preparation in Europe, which certainly was the best plastic filling he ever used. It cost five dollars a bottle, holding about half an ounce. Cases had come under his care where teeth were very soft, but this zinc oxide stood remarkably well. It is a German patent, and is said to be bony phosphate of calcium, magnesium and zinc.

Dr. E. PARMELY BROWN, Flushing, referred to a similar preparation, called the Dentoplast, which he made several years ago, and which he found was liable to be injured as a filling when it came into contact with salt.

Dr. ATKINSON said that, in his opinion, the best oxyphosphate now in the market is Smith's Adamantine.

The President also expressed the same opinion.

Dr. C. S. STOCKTON, Newark, was opposed to putting oxyphosphate over live pulp; gutta-percha is better. He had a case of a boy, fourteen years of age, whose teeth had been filled with well-nigh everything, and he feared that he was going to lose them after all.

Dr. BROWN recommended the use of gold. Glass tubes had been filled at the clinic that were almost as thin as pasteboard, and eight and a half years ago he filled a right upper canine and a right upper lateral that were enamel shells, but they were preserved with the gold.

MECHANICAL ABRASION, CHEMICAL EROSION—PREVENTION  
AND REMEDY.

The above subject was down for discussion, and it was opened by Dr. G. A. MILLS, who gave a description of two cases of mechanical abrasion that came under his notice, and his method of treating it.

Dr. BROWN expressed the opinion that, after all, God had a purpose in letting teeth decay. If they all remained sound, where would the dentist have been—how would he have struggled out of the gutter to the position he now occupies in the world? His (Dr. Brown's) father was brought up on corn-meal, and used to tell his wife to have her gingerbread made hard. He ate hard things and worked his jaws. He lived to be eighty years of age and then he lived six years longer, and during the latter part of his life mastication was a misery to him, because he had worn his teeth down to the gums. What is needed in such cases is, that the teeth be shod, and, if this were done more frequently, years of partial misery would be saved to the aged.

Dr. W. H. ATKINSON observed that a good example of mechanical abrasion was seen in the case of Mr. Brown's father. It was also to be seen in savage nations, the members of which die because they cease to be able to eat. Civilization has added greatly to the length of human life, notwithstanding contrary statements. But a great amount of evil is worked by the extraction of six-year molars—teeth which were meant to stand the brunt of trial at the time when the teeth are changing. If he had the voice of an angel he would sound it, if he might thereby redeem some of his brethren from the use of the forceps, as well as anæsthesia, both of which have been instruments of the demon of darkness.

Dr. BÜDECKER said that a gentleman, who had since come to him, went, ten years ago, to a dentist (who used to be a member of the First District Dental Society) with an aching six-year molar in the lower jaw. The dentist said that the tooth must come out. Afterward the six-year molar on the other side of the mouth began to ache. The dentist said that it must come out, and when he was about it the other three might as well come out as well, for they would very soon decay, too. In a short time he went back to the dentist, saying that he could not get on very well with so many teeth absent, and the dentist replied that it would be all right, for the front teeth and all the others would soon have to come out and then he could have a whole artificial set. He referred to this case as an example of how some men used the forceps.

The meeting then adjourned.

TRANSACTIONS  
OF THE  
ODONTOLOGICAL SOCIETY  
OF GREAT BRITAIN.

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ORDINARY MONTHLY MEETING, JUNE 7TH, 1880.

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ALFRED J. WOODHOUSE, Esq., President, in the chair.

The minutes of the previous meeting were read and confirmed

The PRESIDENT announced that Mr. Charles Vincent Cotterill, of Rochester, had been proposed for election and would be balloted for at a subsequent meeting.

MR. LEONARD MATHESON, of Oxford Road, Manchester, was balloted for and elected a non-resident member.

DR. WALKER read the following notes of a case of Hemorrhagic Diathesis :

A. W., aged thirty-eight, a night watchman, came before Dr. Walker, at the Westminster Hospital, on the 3d of March last. He stated that he had always bled a good deal from slight wounds or cuts, as in shaving. When a boy he used to be subject to profuse epistaxis—frequently bleeding until he fainted—had not suffered in this way since he was fifteen. Neither father nor mother was disposed to hemorrhages. One brother was liable to epistaxis. Father believed to be syphilitic.

When nineteen years of age patient had left upper second molar extracted—it was broken. He was laid up for a month after the operation, on account of hemorrhage; the actual cautery was applied. When thirty-three years of age the left upper first molar was extracted at St. Thomas' Hospital: it also was broken. After the operation bleeding occurred at intervals for seven weeks. He was treated as an in-patient for five weeks. Perchloride of iron, but in solution and in crystals, was used, and the actual cautery was applied seven times. For six or eight months after leaving the hospital the patient continued to be subject to occasional hemorrhage, and sometimes it was very free, lasting for two or three hours at a stretch. There had been slight bleeding at times until quite recently.

During the night of February 27th a kind of tumor formed on the gum, at the seat of the extraction. The gum felt sore, and there was some pain and tenderness over the left side of the face and upper part of the neck, but most marked below the eye and just in front of the ear. No deep-seated pain in the ear.

When the patient was seen by Dr. Walker the tumor was found projecting in front of the wisdom-tooth; it was dark-colored, rather soft, and about the size of a cherry. Mr. Pearce Gould, who also examined the patient, remarked on its resemblance to a myeloid epulis. Next day the swelling burst, and "about a cupful of blood and matter" escaped. The bleeding soon ceased.

The patient was again seen by Dr. Walker on the 10th. All that then remained of the tumor was some shriveled mucous membrane and blood-clots. Dr. Walker extracted a fang of the second molar, which had been left behind, and the wisdom-tooth; the latter was carious, and its fangs were partly absorbed and very rough, and continuous bleeding occurred for hours, and was only controlled by plugging. Patient was admitted into the hospital, the sockets were plugged with cotton wool soaked with Liq. Ferr. Perchlor., and he was ordered ice to suck. There was but little bleeding during the day; early next morning it broke out again, but was checked by the insertion of fresh plugs, and did not return. On the 16th he was allowed ordinary diet and was made an out-patient a few days afterward. He attended several times, but was not again troubled with the hemorrhage.

MR. CHARTERS WHITE said that this case confirmed him in an opinion he had formed long since, that perchloride of iron was a most inefficient remedy for arresting hemorrhage. He had often found it so in his own practice, and had heard the same remark made by others. He now always used Richardson's Styptic Colloid, which he found very effectual.

The PRESIDENT said he quite agreed that the styptic colloid was one of the best remedies for the arrest of hemorrhage which had yet been discovered. With regard to Dr. Walker's patient he thought that probably the recurrent hemorrhage treated at St. Thomas' Hospital came from the dental vessels of the roots which had been left, and, so long as they were in the gum, it was impossible properly to get to the seat of the bleeding.

The SECRETARY showed a flask, of very ingenious and simple construction, made by Mr. Bedmore, of Exeter. The lid was made to slide in a groove and was fixed by a wedge.

Mr. PERCY MAY showed a model of the upper jaw of a patient, aged



eighteen, which presented the following peculiarities : The temporary incisors had been extracted at ten years of age. A year or two later a couple of supernumerary teeth made their appearance, occupying the position of the left central incisor ; and then, a few months ago, a very peculiar tooth, stated by Mr. Charles Tomes to be an odontome, came through in the place of the right central incisor. Mr. May removed these three abnormal productions to make room for the two permanent incisors which were now just in process of eruption.

The PRESIDENT then called upon Mr. E. Canton to read his paper.

ON THE RELATION OF CARIOUS TEETH TO FUNCTIONAL DERANGEMENTS.  
BY EDWIN CANTON, F.R.C.S.

MR. PRESIDENT AND GENTLEMEN:

I have first of all to thank you for allowing me to make my communication to the Society in a less formal manner than is, I believe, customary. I have not composed an elaborate paper, but propose simply to relate to you briefly an account of certain instructive cases which have come before me in the course of my practice, and to make such remarks and suggestions as may occur to me as I proceed. I think you will find that these cases illustrate some interesting points with regard to the relation of carious teeth to certain diseases or functional derangements of other parts of the body which are not generally supposed to have any such connection; and I have reason to know that some of these points of relationship are, if not absolutely novel, yet certainly not recognized or appreciated as they should be by the majority of members of the medical profession. For instance, it is, of course, well known that imperfect mastication of food is a common cause of diarrhœa, but few medical practitioners appear to be aware that habitual constipation is not unfrequently due to this cause. Yet I could relate many examples of this. Thus, a gentleman, aged forty, was brought to me by his medical attendant, who supposed him to be the subject of disease of the rectum. The patient suffered from most obstinate constipation : the bowels never acted except under the stimulus of strong purgative medicine, and even after a free evacuation he had always a feeling "as if something had been left behind." I examined his rectum, but could find no evidence of disease, and then, going at once to his antipodes, I examined his teeth. Those of the upper jaw were good and complete in number, but he had lost his lower molars on both sides : the upper teeth were, therefore, useless for want of antagonists. I recommended that the patient should be fitted with a lower denture—this was done—the patient needed no

more purging and the symptoms of stricture of the rectum completely disappeared.

A lady, about forty years of age, pale and thin, was brought to me on account of a supposed enlargement of the spleen. Her husband, who had evidently been reading up the subject, wanted to know if she was not suffering from leucocythæmia. She had, indeed, a large tumor on the left side of the abdomen, but careful examination showed clearly that this was not an enlarged spleen, but an enormous accumulation of fæces in the descending colon, and on cross-examining the patient I learned that some fullness first appeared on the right side, and gradually traveled across the upper part of the abdomen, increasing as it went, until it reached the position in which I found it. This lady had suffered from dyspepsia for years, and on examining her mouth I found that the state of her teeth rendered the proper performance of mastication an impossibility. I recommended first a course of purgative medicine, and then a set of artificial teeth. So solid was the mass that the purgatives produced for some time but little effect, and the medical attendant had to empty the rectum with a spoon, removing a quantity of hard scybalæ, which, as he said, "fell like brick-bats on the floor." Eventually the patient made a good recovery.

One of the symptoms which this lady complained of was a feeling of numbness down the left leg, due to the pressure of the hard mass of fæces in the sigmoid flexure and rectum on the origin of the sciatic nerve. And this leads me to remark that bad teeth, imperfect mastication and consequent constipation is a chain of causes which frequently gives rise to sciatica; and the fact that the rectum crosses the origin of the left sciatic nerve accounts for another fact, viz., that sciatica is most common on that side. In such cases I am in the habit of prescribing the following pills: Take of Calomelanos, gr. x ; ol. Crotonis, gtt. i ; micæ panis, q. s.—m. ft. pil. ii. The second to be taken seven or eight hours after the first. A very common result of this treatment is to bring away a large quantity of fæces, even though no accumulation had previously been suspected. And in these cases it will generally be found that faulty mastication is the real cause of the disease ; the purge will *relieve* the patient for the time, but the only permanent *cure* is a good set of teeth.

The following case illustrates another possible effect of the same causes : I was asked to see a gentleman, living at Brixton, who was suffering from severe spasms of the muscles of the right leg. He had consulted me some years previously on account of troublesome consti-

pation and I had ordered him pills which completely relieved him. He had been in the habit of walking to his place of business in the city ; then, as the spasms began to trouble him, he was obliged to ride ; and at last they became so bad that his leg was quite useless, and he was compelled to give up business altogether. I found that the muscles affected were those of the front and inner part of the thigh, with the extensor of the fascia lata. His general health was good ; he had no symptoms of spinal disease, though he was under treatment for it, and the spasms were confined to the muscles supplied by the anterior crural nerve. This induced me to search for some local cause, and I soon found a dull, hard mass in the right iliac fossa : the cause of the mischief was an accumulation of fecal matter in the cæcum, which pressed upon the trunk of the anterior crural nerve. The patient, thinking himself cured of his constipation, had discontinued taking his pills and this accumulation of feces had been the result. I put him on a course of purgative medicine, and he at once began to pass large quantities of solid feces. It took some weeks before the collection was entirely removed, but as the colon was gradually emptied the spasms diminished in severity, and finally ceased altogether. This patient also had no molar teeth, and herein lay the real cause of his troubles.

In the following case the exact line of connection between the cause and effect was not so clear, but that there was a connection cannot be doubted: One of my patients sent her servant to me—a woman of thirty-five years of age—who complained of dull, aching pain in the left ankle. I could find nothing wrong locally, but the patient had been getting thin; had suffered for some time from dyspepsia, and *she had very bad teeth* ; the molars, particularly, were all decayed, and some of them reduced to “stumps.” I refused to order her any medicine, but told her to get a set of teeth. At first she paid no attention to my advice, but a short time afterward called again to say she was convinced that I was right. She had some tough steak for dinner one day, which gave her an acute attack of indigestion, and at the same time the pain in her ankle became very severe, although previously to the meat she had none. She then got the teeth, became fat and strong, and has had no trouble since.

It is, in fact, scarcely possible to exaggerate the importance of proper mastication of the food. It should be reduced by the teeth to a complete pulp, and unless so reduced the digestion is sure to be deranged and general lowering of health will follow. The imperfectly digested mass which passes through the pylorus does not take up a proper amount of bile—Nature's purgative—and the consequences which I have just been describing follow as a matter of course.

I have said that imperfect mastication always causes more or less general impairment of nutrition. This is sometimes very marked. The patient continues for some time thin and weak, and at last falls an easy victim to any illness by which he may be attacked. In women this low state of general nutrition greatly predisposes to barrenness. A young lady was brought to me by her husband ; she had been married for some time, but had no family. She was thin, "nervous," had no appetite, suffered from indigestion when she did eat, was restless at night and had bad dreams. I asked her if she masticated her food properly, and she answered, "Oh, yes" ; but, on looking into her mouth, I found that her teeth were very badly decayed. I recommended the supply of molar teeth ; they were adapted, the lady got stout and strong, soon became pregnant and eventually had several children. So marked was the improvement in her health, and so evident the connection between this and the subsequent pregnancies, that when the husband paid me an occasional visit, and I asked after his wife, he used to answer, "Oh, she is quite well, thank you, Mr. Canton, *she does not want any more teeth !*"

Another case was that of a gentleman, aged forty-five, who had been treated by several physicians and was said to be suffering from "atrophy." When he came to me he was so miserably weak and wasted as to have all the appearance of a dying man. Yet, after a very careful examination, I could find no evidence of any specific disease, but I did find that the state of his teeth was such that he could not possibly masticate. I therefore told him that all he wanted was a good set of teeth. He then said that he had made arrangements for a trip to New York, and that as American dentists had a great reputation for cleverness he would have some teeth made there. I did not see him for a few years, and when he revisited me he had become a healthy man. He had been to New York, had taken no more medicine, but had obtained the teeth, and simply by the help of these and careful attention to diet had quite recovered his health.

Before I conclude, I should like to give my testimony in confirmation of the views expressed by Dr. Brunton in the paper which he recently read before this Society. I have no doubt whatever as to the powerful influence of dental irritation in producing derangements of the nervous system. Not long since, a strong, healthy looking young man, aged nineteen, came to me, stating that he had lately become subject to epileptic fits. It struck me that the fits might possibly be due to the cutting of his wisdom-teeth, since the cause of the seizures was inscrutable to his medical advisers ; and on looking into his mouth I found that all had



appeared except one, which was just struggling to come through. I laid bare the crown by a free crucial incision and kept it exposed. The fits never recurred.

About four months ago a young lady was brought to me by her father. She was suffering from almost complete paralysis of the left leg and could not walk without the assistance of a stick. She had no symptoms of disease of the brain or of the spine, but her left lower wisdom-tooth was only half through the gum. She had been under the care of several eminent surgeons and physicians, but who, unable to detect a cause, had not examined into the state of her teeth. On making inquiries, I learnt that the tooth had given her pain for three years past, and that feebleness of the leg commenced at the same time. The patient did not continue under my care, so I had no opportunity of ascertaining whether my suspicions as to the cause of the paralysis were well founded: but we know that paralysis from teething is not very uncommon in children,\* and that similar results do occur, though rarely during the eruption of the permanent teeth. This lady is now under the care of a surgeon who considers her paralysis to be of spinal origin, and she has been consigned to a "Sayer's jacket" for twelve months. •

In conclusion, I have only to thank you for your patient attention, and trust you will consider that the cases I have brought forward convey some useful practical lessons.

The PRESIDENT, after thanking Mr. Canton, in the name of the Society, for his very suggestive paper, remarked that as Mr. Mummery was about to read a paper on a somewhat similar subject, he thought it would be better to postpone the discussion of Mr. Canton's very interesting series of cases until that had been read, and then to discuss the two papers together. He would, therefore, at once call upon Mr. Mummery to read his paper.

A REMARKABLE CASE OF STRABISMUS AND BLANCHING OF THE HAIR, ARISING FROM A DISEASED TOOTH; WITH ADDITIONAL INSTANCES OF NERVOUS DISORDERS ARISING FROM DENTAL IRRITATION. BY J. R. MUMMERY.

MR. PRESIDENT AND GENTLEMEN:

The attention of the Society has been occupied, at some recent meetings, with the consideration of remote nervous affections originating in diseases of the teeth. Having been unable to be present on those

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\* As an example of this, Mr. Canton brought forward a little girl, four years of age, and very intelligent, who labored under partial paralysis of the left arm and leg,

occasions, I take this opportunity of bringing before the Society notes of a very interesting case of strabismus and blanching of the hair, which resulted from a remarkable form of disease in two molar teeth.

I have also selected a few other cases from the list of those I have recorded during a lengthened professional experience, in further illustration of the subject.

In the month of January, 1878, I was consulted by a young lady who suffered acute neuralgic pain on the left side of the face. I learned that some months previously, in a distant part of the kingdom, the left first upper molar had been filled, at its distal surface, with amalgam. Much pain and discomfort had ensued, and when I saw the patient severe lancinating pain was felt throughout the ramifications of the fifth nerve, especially in the temporal region, and the motor branches were so seriously involved that the left eye was drawn toward the outer angle of the orbit and the pupil was entirely hidden from view.

I removed the stopping, and finding the pulp exposed, I applied arsenious acid and cleared out the roots. On the following day a considerable amount of relief was experienced, but no alteration had taken place in the position of the eye. I reluctantly extracted the tooth, and on the fourth day the pain had nearly disappeared and the eye had perfectly recovered its natural position. The illness of a relative compelled my patient to leave London in the following week; but in the month of November she returned to town, when I found that all the symptoms had returned with increased severity. I had detected on the former occasion a small cavity on the mesial surface of the second molar and filled it temporarily with Hill's stopping, with a view to treating the case effectually, which was prevented by the young lady's sudden departure from London.

When I again saw my patient the left eye was completely closed, and on raising the upper eyelid the peripheral margin of the iris could alone be seen.

The patient's hair, of a dark brown color, had become blanched on the left temple to the extent of fully two inches in diameter, and the neuralgic suffering was intensely aggravated.

I removed the tooth without delay, and by the fourth day the eye had

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which appeared during the cutting of the temporary teeth. She was subject during this time to convulsions of a very severe character, accompanied by coma and strabismus. The insensibility lasted for many hours. The child's general health was now very good, but the paralysis persisted in spite of careful and prolonged medical treatment.

regained its normal appearance—the pain also gradually disappeared. On splitting open the tooth the roots presented a very remarkable condition. The pulp of the palatal root appeared to have become extensively hypertrophied (the wall of that root being proportionally absorbed), and this portion of the pulp afterward to have become calcified from the apex of the root to its contact with the still living coronal pulp, which, with the pulp of the buccal roots, was highly congested and bled on being punctured. I have never met with a case in which similar conditions existed, and am inclined to attribute the severity of the symptoms to the pressure of the calcified pulp upon the living portion, and to the peculiar state of constriction which existed in the absence of any external aperture in the affected tooth. I have received a report of the patient's state of health within the last week, and am informed that no return of strabismus or of neuralgic pain had been experienced since her last visit, but that the blanched patch of hair had not in the slightest degree recovered its pigment.

In the year 1871 a lady who was suffering agonizing pain in the right ear, accompanied by absolute deafness on that side, was referred to me by her medical attendant—all the usual treatment having failed even to mitigate the pain. On examination of the mouth I found the lower third molar on the right side extensively decayed and the dental pulp quite decomposed.

The tooth was removed with some little difficulty, the apex of the agglutinated roots being abruptly turned toward the ramus. The tooth was liberated by turning it in a backward direction, and within twenty-four hours the pain had disappeared. The functions of the ear were fully restored within the month following the operation.

A gentleman of tall stature and good physical development (but painfully emaciated and depressed, owing to want of sleep through constant suffering in the nerves of the face and head) consulted me some years since. The pain was restricted to the left side. Every remedy that medical skill could suggest had been employed in vain, and he had obtained sleep only by the use of narcotics for more than four months. He possessed a remarkably fine set of teeth, and more than one examination had led to the conclusion that the pain could not have its origin in teeth which were apparently so free from caries; and after a careful examination I was inclined to the same opinion.

I proceeded, however, to explore the left side with a fine probe, but could discover no sign of caries. I then carefully polished the left canine and incisors, as the patient felt a slight sensation on percussion in

those teeth only ; and on placing him in full sunlight and reflecting a ray of light upon those teeth from the mirror placed within the mouth, I detected a very slight opacity on the distal side of the lateral incisor. but the teeth were so closely impacted that no probe could reach the place of the suspected caries. The canine was inclined forward and impinged forcibly on the distal surface of the lateral incisor. On extracting the tooth I found, at the circumscribed point where the teeth crossed each other, a very minute cavity exposing the pulp. The patient experienced immediate and permanent relief.

I have no doubt that cases such as I have referred to are familiar to my audience, and I will now recount the particulars of some cases in which severe reflex disturbance arose from the pressure of perfectly sound teeth.

A young lady, aged twenty-two, applied to me respecting incipient caries on the grinding surface of a lower molar—the only tooth that exhibited any sign of caries. The cavity proved very superficial, and it was filled with gold, causing no inconvenience. Observing that the lady was wrapped in an unusual number of shawls, etc., I learned that she had for a long time been under treatment for rheumatism, and, among other remedial agents, had often visited German baths without obtaining any relief. I accordingly inquired respecting the seat of her pain, and learned that intermittent paroxysms were felt throughout the ramifications of the fifth pair of nerves ; that a peculiar sensation was felt when pressure was made over the spinous processes of the cervical vertebræ ; and that, in addition to pains in the neck and shoulders, there existed a great sense of weariness and loss of power in the arms.

On examining the third molars in the lower jaw, I found them imperfectly erupted through want of space, and that the upper corresponding teeth were obliquely directed toward the buccal side of the arch. Believing that the impacted position of these teeth had originated her sufferings, I advised their removal, and the four wisdom-teeth were extracted. I found no trace of caries in either of the four teeth, but the roots of the lower teeth were curved in the direction of the ramus, and, like those of the upper teeth, of unusual length. Within a few weeks every trace of the supposed rheumatic affection had totally disappeared.

A young lady whose teeth had been for several years under my care had always appeared healthy and of a cheerful disposition. At the age of sixteen she became subject to severe headaches ; was depressed in spirits and very taciturn. She complained of a feeling of pressure in both upper and lower teeth, accompanied by a dull continuous



pain. As her teeth were perfectly free from caries, but very closely impacted, I judged that the advancing wisdom-teeth bore some relation to her suffering. On passing a sharp probe through the gum I could feel the contact of the instrument with the deeply embedded crown of the tooth in each instance. Repeated lancing gave no relief, and at seventeen the patient became subject to occasional epileptic attacks, causing great anxiety to her family. As the case had become so urgent, and it was impossible to reach the wisdom-teeth, I decided to extract all four of the sound second molars. No attack has occurred since the operation, which took place four years ago, and the patient has quite recovered her health and cheerfulness. In due time the third molars were fully erupted, and are to this day perfectly free from decay.

Some years ago a gentleman of vigorous frame, aged about twenty-eight, consulted me respecting severe neuralgic pain on the left side of the head and face. The pain appeared to originate in the first upper molar, which showed no sign of caries, but the periodontal membrane was evidently the seat of the pain. After trying other remedies, I removed the tooth and found the roots considerably exostosed, the disease taking the form of a minutely granular deposit which covered nearly the whole of the fangs. The only explanation of the case that I can suggest is, that he acknowledged that he was accustomed to crack hard substances with his teeth, and as exceptionally severe work is naturally allotted to the first molar, I conclude that repeated concussions had set up the mischief in an otherwise perfectly sound set of teeth.

About twenty-six years since I saw a gentleman of gouty diathesis who had for a long time suffered intense pain on the left side of the face and head which no remedial measures could relieve. His teeth were free from caries, but the first molar was slightly displaced from its socket. I removed the tooth, and found the roots completely embedded in an exostosed mass, larger than any that has come under my notice. I sent the tooth to Mr. Tomes, and, with the kind consent of Mr. Charles Tomes, I have borrowed it from the Museum of our Society. The patient speedily lost all trace of the pain, and when I recently saw him he had attained the age of eighty-one, having entirely escaped recurrence of his former suffering.

Without citing other cases, I consider that there is sufficient ground for assuming that dental diseases were the source of all these various evils.

In conclusion, I think we may venture to hope that the accumulated testimony of so many observers regarding the reflex morbid influence of

diseases of the teeth will serve a practically beneficial purpose. A clearer light may be thrown upon obscure cases which have baffled all the skill of able medical practitioners in their efforts to relieve suffering.

Before resuming my seat, Mr. President, I will, with your permission, make a brief reference to a curiously absurd clerical error in the tables appended to a paper which I read before this Society in 1869. A few weeks ago Mr. Oakley Coles remarked to me that his measurement of the maxillary arch did not agree with mine. Remembering what great care I had taken in recording all the data from which those tables were compiled, I was not a little surprised to find that the width of the dental arch was stated at two inches, and varying fractions of a third inch. I certainly never found a dental arch that approached three inches on the palatal side of the molars, and it must be evident to all that a race so endowed would rank with the sons of Anak.

The error is easily accounted for. In the voluminous notes which recorded the dental conditions of the over one thousand seven hundred skulls in the list I did not insert the figure 1, but only the fractions of a second inch. As the adjoining column commenced with the figure 2, the column recording the width of arch was accidentally headed with the same figure 2 by my amanuensis.

The most remarkable circumstance is, that although the paper has been quoted by several authors and has led to extensive correspondence, with the accumulation of much interesting and valuable information on the subject, to a large extent serving to confirm my views; yet the error in the tables had hitherto escaped notice, and I am indebted to Mr. Oakley Coles for the discovery of the accidental error.

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#### DISCUSSION.

The PRESIDENT, after thanking Mr. Mummery for his interesting paper, invited Dr. Bellisario, if he had sufficiently recovered from the fatigues of his journey, to address the meeting. He felt sure that Dr. Bellisario from his large experience would at least be able to illustrate the subject by some instructive cases.

Dr. BELLISARIO, of Sydney, said he could confirm Mr. Canton's suspicions as to the cause of the paralysis of the leg which he had spoken of by relating the following case: A young lady, aged twenty-five, came to him complaining of severe pain on the right side of the jaw, and stated also that her right arm had been paralyzed for seven months. She had tried various remedies for the neuralgia, but without

benefit. She had a very fine set of teeth, but the right lower wisdom-tooth was absent, and on exploring with a sharp-pointed probe Dr. Belisario found that the tooth was lying horizontally in the jaw, the crown being impacted against the second molar. Having got the patient under chloroform, he cut away a piece of the outer plate of the maxilla and with some difficulty removed a large wisdom-tooth. The patient was at once relieved of her pain and gradually recovered the use of her arm.

Mr. E. MOORE asked Mr. Canton at what age he thought it might be advisable to supply artificial teeth? It was not an uncommon thing to meet with children of twelve to fourteen years of age whose molars were quite useless to them: did Mr. Canton think it advisable to supply teeth at so early an age?

Mr. F. CANTON mentioned the case of a clergyman who had been sent to him by his medical attendant to be supplied with a set of teeth. The patient, who was quite edentulous, had suffered much from dyspepsia. The teeth were fitted, and the patient at his next visit declared himself much better, although he could not eat with the teeth. The explanation seemed to be that the mere presence of the plates had caused a greatly increased flow of saliva, and that this had facilitated digestion.

Mr. STORER BENNETT asked whether Mr. Canton could give any further information as to the effects of treatment in the case of the young lady with paralysis of the leg.

Mr. GEORGE PEDLEY remarked that the "bolting" of food caused deranged digestion in two ways: for the movement of the jaws in mastication, besides effecting the thorough pounding of the food, also greatly increased the flow of saliva, and this was a very important factor in perfect digestion.

The PRESIDENT remarked that probably few people were aware how large a quantity of saliva was poured out during a meal. A patient of his had the misfortune to have one of his parotid ducts wounded during an operation for the removal of a tumor from the cheek, and a fistulous opening had resulted. In this case two napkins would be saturated during dinner by part of the secretion of one salivary gland, for a portion still entered the mouth by the natural channel.

Dr. WALKER said he had met with several cases of very severe neuralgia due to exostoses on the roots of apparently sound teeth. One gentleman, who had been employed as a surveyor in Spain, had suffered intensely for three years, and when he came to Dr. Walker was very thin and ill in consequence. Four upper molars were extracted, all extensively exostosed, and the patient was entirely relieved. Another case was

that of a girl, aged nineteen, who had to be carried into his room on account of partial paraplegia. He extracted several teeth, and she recovered and remained well for three months. She then had severe pain on the right side of the face. Dr. Walker extracted a stump which was found to be exostosed. The patient had no more pain, got quite strong and afterward married.

Mr. MUMMERY asked whether any one could throw any light on the pathology of the case of strabismus and blanching of the hair which he had related. The state of the pulp cavity was very remarkable; he had not been able to find a similar case recorded in any work with which he was acquainted.

Dr. BELLISARIO said that the only case at all resembling it which had come under his notice, was that of an Indian officer who was visiting Sydney on furlough. He came to him complaining of severe pain on the right side of the face, which was ultimately referred to a lower molar. But on proceeding to extract it, Dr. Bellisario found that it was split down the centre. The patient could not account for the tooth being broken, and on examination it was found that the pulp was completely calcified. Dr. Bellisario believed that it had been split by the pressure of the calcifying mass within.

Mr. CANTON, in reply to the questions put to him, said that he could not give any age at which it might not in some cases be desirable to supply artificial teeth; it depended on the fact whether or no any other means could be found to supply the want. As to the young lady with the paralyzed leg, the case was scarcely within the scope of his practice, and therefore he did not undertake the treatment. He believed, however, that she still remained in much the same state; the tooth had not been removed and the disease was said to be spinal.

The PRESIDENT then proposed a vote of thanks to the authors of the papers and casual communications. This having been carried unanimously, the President reminded the members that this was the last meeting of the session, and expressed a hope that before they met again they would all have benefited by a well-earned and well-enjoyed holiday.

The meeting then terminated.

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ERRATUM.—Dr. W. H. Robinson, of Suisun, requests us to say that on page 410 of the November MISCELLANY, in the eleventh line, the phrase “and let it drop against first one mallet and then another” should read “and let it drop against first one *plugger* and then another.”



## THE ACTION AGAINST THE CELLULOID COMPANY.

IN the October term of the Supreme Court of the United States the case of the Goodyear Dental Vulcanite Company, appellant, vs. Charles G. Davis, an appeal from the Circuit Court of the United States for the District of Massachusetts, came before Mr. Justice Strong. He delivered the opinion of the Court as under: The invention described in the Cummings re-issue patent is claimed in the words following: "The plate of hard rubber or vulcanite, or its equivalent, for holding artificial teeth, or teeth and gums, substantially as described." The claim cannot be understood without reference to the details given in the specification. In that it is said to consist "in forming the plate to which the teeth, or teeth and gums, are attached of hard rubber, or 'vulcanite,' so called—an elastic material possessing and retaining in use sufficient rigidity for the purpose of mastication, and, at the same time, being pliable enough to yield a little to the motions of the mouth." The mode of "forming" the plate is then minutely described. The specification proceeds as follows: "The teeth are provided with pins projecting therefrom in such a manner that the rubber which is to constitute the plate will close around them, and by means of them hold or secure the teeth permanently in position. The plaster mold, with the teeth adhering therein, as just described, is now filled with soft rubber, a little at a time, pressed in with the finger, or in any other convenient way; and care is to be taken that the rubber is made to completely fit into the cavities and around the protuberances, including the pins, and is filled in to the thickness or depth desired to form the plate." "I then," says the patentee, "lock the rubber plate in position by shutting the other half of the plaster mold over it, to insure its retaining its exact form while warming, and then heat or bake it in an oven, or in any other suitable way. The soft rubber or gum so inserted into the mold is to be compounded with sulphur, rubber, etc., in the manner prescribed in the patent of Nelson Goodyear, dated May 6th, A. D. 1851, for making hard rubber, and is to be subjected to sufficient heat to vulcanize or harden it, substantially as directed in that patent. It is also to be colored in imitation of the natural gums, by mixing it with vermilion or other suitable coloring matter while in the soft state. After the plate has been heated sufficiently to harden it, or convert it into hard rubber or vulcanite, so called, the mold is removed and the plate is polished

ready for use." Such is the description both of the material of which the plate is formed and of the method or process by which it is made. To constitute an infringement of the patent, both the material of which the dental plate is made, or its equivalent, and the process of constructing the plate or a process equivalent thereto, must be employed. It is, therefore, essential to a correct determination of this case, to consider what was the material made by the patentee an element of his invention, and what can be considered an equivalent therefor. It is impossible to read the specification of the original patent, or that of the re-issue, upon which the suit is founded, without the conviction that the patentee had in mind, primarily, a single substance for his material, and that one of a peculiar character, itself a compound, discovered and patented not long before; thus in the original, which was loosely drawn, the invention was said to consist "in forming the plate and gums, to which the teeth are attached, of rubber, or some other elastic material, so indurated as to be rigid enough for the purpose of mastication, and pliable enough to yield a little to the motions of the mouth, and in one piece, the teeth being embedded in the elastic material while the said material is in a soft condition, and then baked, with the gums and plate, so that the teeth, gums and plate will all be connected, forming, as it were, one piece." And again, "the plate and gums are formed of one piece, and of rubber, and the compounds commonly employed therein, or of gutta-percha, or, in fact, of any elastic substance which can be reduced to a soft condition, *and then vulcanized*, or hardened sufficiently to answer the purpose. The rubber or other material used is first molded to fit the shape of the mouth, and the gums formed, and while soft and pliable the teeth are embedded in the gums. \* \* \* The teeth, gums and plate being thus connected, are then baked until the elastic material becomes sufficiently vulcanized, when the process is completed." The claim also expressed the same thought. It was "forming the plate and gums in which the teeth are inserted, in one piece of hard rubber or vulcanite, *i.e.*, an elastic material which can be hardened sufficiently for mastication, and retain a portion of its elasticity, so as to yield a little to the motion of the mouth, as herein set forth, and for the purposes specified." \* \* \*

It appears that, whatever the material used in the construction, a dental plate, according to the patent, was required to undergo a process of vulcanization in the manufacture, and to be made what it is,

whether denominated rubber, hard rubber, vulcanite or other elastic material, by that process. Every substance not capable of vulcanization by that process was, therefore, necessarily excluded from the reach of the patentee's invention. Nothing could more plainly show that a dental plate made of any other material than a compound, vulcanized according to Nelson Goodyear's process, was not intended by the patentee and by the Patent Office to be covered by the patent. By Goodyear's patent, caoutchouc or soft rubber is converted into hard rubber; that is, vulcanized by mixing sulphur with it in about the proportions of from four ounces to a half pound of the former to a pound of the rubber, and then heating the compound during a period of from three to six hours to a temperature of from two hundred and sixty to two hundred and seventy-five degrees of Fahrenheit. The use of that process was made indispensable to the invention, and it was the product of that which was the material of which the patented plate is constructed. If, when the patent was granted, there were known substances other than rubber or caoutchouc, gutta-percha or gums, that could be vulcanized by the Goodyear process, and converted from a soft into a hard, elastic material, any use of that material for a dental plate might have been an equivalent for the Cummings material, and an infringement of his patent. This construction of the patent is confirmed by the avowed understanding of the patentee, expressed by him, or on his behalf, when his application for the original patent was pending. \* \* \*

It remains to inquire whether the manufacture, by the defendant, of dental plates out of the material known as celluloid, or solid collodion, is an infringement of the Cummings re-issue. We think it is not. Celluloid is a substance of a comparatively recent discovery. Whether it was known at the time Cummings made his invention, or even at the time when his original patent was granted, we do not care now to inquire. It is sufficient for this case that we consider what it is. It is a compound of vegetable fibre, cellulose, or gun-cotton. Undoubtedly it can be employed for manufacturing dental plates, and as a base for artificial teeth. Such a plate may have the fineness, lightness and elasticity of a plate made of hard rubber by the Cummings process, but it is a substance very different from hard rubber, and it is incapable of the same manipulation. It is not vulcanite, and neither it, nor its ingredients, is capable of being vulcanized. It contains no sulphur or rubber. None of its constituents are vulcanizing agents. Camphor does not perform the

function of sulphur. Under the action of heat its tendency is to soften the compounded mass rather than to harden it, as sulphur does rubber. When the ingredients of celluloid are compounded the product is hard, unlike caoutchouc or gums generally, and heat softens rather than hardens it. When employed in manufacturing dental plates, the process is wholly unlike that employed in making hard rubber or vulcanized plates. It is put into a mold, it is true, such as was known and in use before the Cummings invention, but it is put in a hard state, in its natural condition, and not soft or plastic, and capable of being pressed around the teeth. The mold cannot be closed until heat is applied. When that is applied the jaws of the mold are gradually screwed together as the celluloid softens, and when the jaws come together the plate is completed. The process requires pressure in addition to heat, in order to reduce the plate to shape, and compress it around the teeth. There is no heating for hours, as is necessary in the vulcanizing process. The work is done in a few minutes. When allowed to cool it is the same hard and bony substance it was before its manipulation, and in this respect also it is unlike vulcanite. It is obvious, from all this, that neither in the nature of the material of which it is made, nor in the process of manufacture, which is an essential part of the Cummings invention, as we have seen, is the celluloid plate substantially the same as one made of hard rubber.

Nor is celluloid an equivalent for hard rubber, for the reasons already suggested, that it is not capable of vulcanization, and that it cannot be made into a plate by the process prescribed by Cummings. It may be conceded the patentee is protected against equivalents for any part of his invention. He would be, whether he had claimed them or not. But when a product arrived at by certain defined stages or processes is patented, only those things can be considered equivalents for the elements of the manufacture which perform the same function in substantially the same way. The same result may be reached by different processes, each of them patentable, and one process is not infringed by the use of any number of its stages less than all of them. In view of these considerations we are constrained to rule that a celluloid dental plate is not an infringement of the Cummings patent. Celluloid is not an equivalent for the material which the patent makes essential to the invention, and in the use of it for a dental plate, the process which is inseparable from the invention, is not, and cannot be, employed. The decree of the Circuit Court is, therefore, affirmed.



## ENGLISH DENTAL POLITICS.

BY A LOOKER-ON.

LONDON, *December.*

TO THE EDITOR OF JOHNSTONS' DENTAL MISCELLANY :

*Dear Mr. Editor*—My first feeling on the receipt of your request that I should contribute to your journal a series of letters on "Dental Affairs in England," was one of pleasure at the compliment thus paid me ; but this was soon counterbalanced by a sense of the difficulty of the task. Not that I am at any loss for matter to write about ; on the contrary, my trouble is, that there is so much to tell that it is difficult to know where to begin. Dental politics in England are just now so involved, and party warfare so embittered, that I can well conceive that American readers are thoroughly puzzled when they take up a file of our journals and read, first, a petition for the repeal of the Dentists' Act from one section of the profession, next a memorial in favor of the Act from the second, and then find that both these contending divisions are in arms against a third, whom they designate as intruders and impostors, and whose expulsion from the ranks they are doing their best to effect.

It is, indeed, a very pretty triangular duel, if I may use such a Hibernicism. On the one side is the "Association of Surgeons Practicing Dental Surgery," composed of fully-qualified members of the medical profession, who, either from choice or by accident, have restricted themselves to the practice of dentistry. They direct the fire of their wrath principally against the next party, that composed of the Dental Licentiates, men who have obtained only a special diploma in dental surgery answering nearly to your D.D.S. The surgeons pretend to see no difference between this class and the third, viz. : the "registered" dentists—men who possess no surgical qualification whatever, but who are legally recognized as members of the profession, because they laid claim to this position at the time of the passing of the Dentists' Act, and because it was decreed in that Act that their self-asserted "rights" were not to be interfered with. A considerable proportion of these individuals are retail druggists.

Against these surgically unqualified but legally "registered" practitioners the licentiates, who, with some dissenting members of the surgeons' party, have organized themselves into the "British Dental Association," are working tooth and nail, while they affect to

consider themselves, and probably are, safe against any force which the divided surgeons can bring against them. These latter, however, though they are numerically by far the smallest of the three parties, by availing themselves of every possible opportunity of airing their grievances in the public journals, succeed in making the greatest amount of noise, and it is with their view of the case that the public generally is best acquainted.

It will be seen, then, that to give an intelligent explanation of how this came about, so as to enable your readers to understand the present position of parties, would afford material for several letters. I am, however, a little doubtful as to how much interest your readers would take in such an account. Here the position which a man takes in one party or the other is largely influenced by individual friendships, personal likes and dislikes, and other similar considerations, which lend a fictitious interest to the dispute, and it is often difficult to say how much is due to this and how much to a real belief in the truth of the principles professed. Still, there are important questions of policy involved, and besides, as I have already said, without some previous knowledge of the subject a great deal that appears in our journals would be quite unintelligible to a stranger. I will therefore, with your permission, give in my next letter a very brief sketch of the origin of these several parties, and, as regards two of them, of the political principles which they profess to represent. As to the class of unqualified practitioners, they can scarcely be said to be troubled with any principles at all, and are thus the better able to carry on a Scythian fight with their powerful enemies, and to make a living at the expense of the unsuspecting public.

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## PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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IN the *Missouri Dental Journal* Dr. J. Foster Flagg combats the assertion made by the anti-"new departure" men, that the advocates of the "new departure" cannot make first-class gold fillings. The Doctor does not meet the soft impeachment with a bludgeon, but contents himself to play around it, and remarks, that if even the "new departurists" cannot fill teeth with gold, that is nothing against the new theory of plastics. He ingeniously remarks that he regards dentistry as the science of saving teeth, and not as the science of

packing them with gold. In staccato phrase, Dr. Flagg mildly jeers at the "grand men" who he feels have jeered at him, and concludes with the war cry, "Tooth salvation!" American dentists are very conservative, Dr. Flagg notwithstanding, and they will hesitate a very long while before they "eventuate" (to use one of Dr. Flagg's words) in a general acceptance of the dictums of the "new departure."

I would not for a moment advocate any practice on the part of medical men or dentists which would tend to bring them, or the professions they belong to, into disrepute; but I cannot forbear the remark that the outside public regard with something akin to disgust the affected super-sensitiveness which some members of the professions show if a brother allows himself to be interviewed by a newspaper reporter. A worthy person, signing himself "More Anon, M.D.," writes to the *Practitioner* a letter which conveys to the ordinary mind that in his opinion "furnishing secular newspapers with accounts or reports of surgical operations performed . . . is certainly in violation of the code of ethics, and yet these things (*sic*) are done by men who are members of reputable medical societies." Fearful! Surely the heavens will fall! What right has the public to read even an "account" of a surgical operation performed? But where shall the line be drawn? If a man falls down and breaks his leg, must not the surgeon tell the reporter that the leg was amputated? I am as desirous as any man of upholding the dignity of the medical and dental professions, but then I remember that even the members of these professions are portions of the great human family, and to attempt to draw so tight a rope under the name of "a code of ethics," between themselves and the rest of the world, is absurd. There should be nothing so occult in every surgical operation that "secular newspapers" (as they are sneeringly called) should be deprived of "accounts" of them.

In the *British Journal of Dental Science* before me there appears an article by Mr. W. H. Williamson, M.D., D.D.S., on "Nitrous Oxide as an Anæsthetic in Dentistry." To the major part of the article I do not propose to refer, beyond saying that the writer comes to the conclusion that nitrous oxide is by far the safest anæsthetic known. I am more especially interested in a remark which Mr. Williamson makes, *inter alia*, as to what will be the condition of things in the future when an improved race of dentists appear on the stage, all with their D.D.S. degree. How will the poorer classes

then obtain adequate dental attention? This is a question which is as pertinent in the United States as in England. Poor people need as careful and as skillful attention to their teeth as the rich; but how will they get it? With increased difficulties in the way of the dental student, in the shape of stiff examinations, he will think, and think reasonably, that he ought to be paid extra for his experience and knowledge. There are men now practicing dentistry in New York City who seldom use anything more costly than amalgam in filling teeth, who never passed an examination in their lives, who are not polished in their manners, and who do not live in Fifth avenue, but in some semi-squalid district on the east or west side, and who fill teeth for a mere bagatelle. But they do their work well—perhaps nearly as well as it is possible to be done. But this generation is passing away. Will their offices be occupied in the future by men who can lawfully and creditably write D.D.S. after their names? This remains to be proven. I fear the question must be answered in the negative, and that their offices will not be occupied at all. If the coming generation, who will not know Joseph, fail to practice among the poor, and at rates which the poor can afford to pay, then dentistry will become a profession carried on in the interests of the rich only. The future is hazy.

The *London Lancet* of November 20th had an article on "Nitrous Oxide Gas," which contained the following sentence: "As nitrous oxide, though of late occasionally used and favorably spoken of in America by Dr. Matthewson and others, has not, I think, been hitherto tried in this country, the following recital may be of interest, etc." I should like to tell the writer of this novel sentence, that once upon a time there lived in America (which, as he may not know, is separated from the British Isles by the Atlantic Ocean) a man named Washington Irving. This man was a writer—sometimes an imaginative writer. He told us of another man named Rip Van Winkle, who, on the Catskill Mountains, laid himself down and slept a long, long sleep. When he awoke the world did not wag as it did when he began his rest. I merely tell this little story, which, of course, is entirely new to the *Lancet*, in order to suggest that possibly this expert on nitrous oxide may himself have had a similar sleep, and on his waking he may not have realized his long absence from the world. On no other theory can I account for the extraordinary staleness of his news, unless the *Lancet* is becoming a vehicle for excessively clumsy humor.



Mr. F. Richardson, L.D.S., has just read a paper before the Midland Counties branch of the British Dental Association, in answer to the question, "Has vaccination anything to do with the degeneration of the teeth?" A report of his remarks appears in the *Monthly Review of Dental Surgery* (London). Mr. Richardson answers the question in the affirmative, and concludes that frequently "honey-combing" of the teeth, and other dental disorders, are the result of vaccination of children when a few months old, or even of vaccination of the mother during pregnancy. Those of us who live in a country where liberty of action is in some respects more common than across the water would not view with disfavor an attempt of the English dentists to combat the compulsory vaccination laws of their country.

Our Pacific coast friends are still grinding out their views in the *Dental Jaiirus* on the proposed Cogswell Dental College. They seem to be as far off agreement as ever.

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## OBITUARY.

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### SAMUEL WHEELLOCK PARMLY.

DR. SAMUEL WHEELLOCK PARMLY, one of the best-known dentists in the city, died suddenly at his residence, 253 West Thirty-fourth street, last month, of rheumatism of the heart. Dr. Parmly was born in Braintree, Vt., on the 16th of September, 1806. He was one of five brothers, four of whom were dentists. Three of them—Levi, Eleazur and Jehial—at one time had extensive practices in London. Eleazur subsequently became well known in his profession in this city, and with him Samuel completed his professional studies. Continuously since 1838, and up to the day immediately preceding his death, Dr. Parmly practiced dentistry in this city, first on Park place, subsequently on Bond street, and finally on Thirty-fourth street, where he died. He was a man of great success in his business, but of a very retiring disposition. He had literary tastes and ability of no common order, his pamphlets on "Eternal Punishment," "The Life of St. Paul," and kindred subjects, being well known.

### DR. GEORGE H. SMILLIE.

On the night of the 29th of December Dr. George H. Smillie, a well-known dentist in Plainfield, N. J., met with his death in a snow-drift near his home. He had been on a visit to Dr. Campbell, whose house he left at 11 o'clock P. M. Early in the morning he was found

quite dead in the snow by a passer-by. Dr. C. F. Stillman, who viewed the body shortly after it was found, gave it as his opinion that Dr. Smillie was struck with an apoplectic fit, and falling, perished in the cold. He was seventy-three years of age.

## NOTES.

### A PROPOSED DENTAL CENSUS.

THE U. S. Census Office recently sent out a schedule with the object of obtaining information as to the capital invested by individual dentists, their incomes, and various other particulars concerning the profession. There was a general opposition shown against the action of the Census Office; a great many dentists absolutely refused to fill up the schedule. A member of the profession in New York City has kindly shown us a communication he has received from the Chief Special Agent at the Census Office, New York, which is dated January 5th and is as follows: "Upon representation, made by this office, of the general reluctance of the profession to give the information contemplated by the schedule, together with the consideration of papers on the subject from prominent members of the profession also submitted by me, the Superintendent of the Census has determined (under date January 3d, 1881) to omit from the tabulations of this office 'Dentistry in any of its branches.' The inclosed schedule is therefore respectfully returned to the maker thereof.—CHAS. E. HILL, Chief Special Agent, New York."

### PROFESSIONAL AMENITIES.

DR. GEORGE L. FIELD entertained his brother dentists of the city, on the evening of the 24th November, at his elegant apartments in the Abstract building, Detroit. His rooms are the finest of the kind in the city, admirably arranged, spacious, convenient, and have been

fitted up and furnished in fine style. Nearly every practicing dentist in the city was present. At 9 o'clock they sat down to a sumptuous collation spread in one of the rooms. After supper an hour or two was spent in social enjoyment, story-telling, singing songs, etc. These social amenities between gentlemen of the same profession are very pleasant, and show that the petty jealousies and rivalries that have existed in some times and places have given way to a healthy competition in study and improvement, and a personal friendship that is both dignified and enjoyable.—*Detroit Post and Tribune.*

### NABOLI.

DR. G. CARLETON BROWN writes, under date December 1st: The following resolutions were adopted at the last meeting of the Central Dental Association of Northern New Jersey—*Resolved*, That it is the sentiments of the members of the Central Dental Association, that we discountenance the use of a pain obtunder called "Naboli," the manufacturers thereof not giving the formula; and be it further *Resolved*, That we deem it to be an injustice to our patients, and an injury to our professional standing, to use on living tooth substance any medical preparation with the ultimate action of which we are unacquainted.

### THE CUMMINGS PATENT.

THE *Dental Fairus* stated some time back that the Goodyear Dental Vulcanite Company had made application for a

re-issue of their patent which expires by limitation in June next. The *Dental Advertiser* affirms that the *Jairus* is mistaken. The *Jairus* replies that its information was obtained from one of the company's agents. Dr. Rinn, of Sunbury, Pa., writes us a letter in which he strongly urges dentists to "instruct and familiarize the members of their Congressional districts with the history of this patent," so that an extension may be refused by Congress if applied for.

#### AMERICAN ACADEMY OF DENTAL SCIENCE.

THE annual meeting of the American Academy of Dental Science was held on October 27th, in the lecture room of the Boston Society of Natural History, at 10.30 A. M., President J. L. Williams in the chair. The annual address was delivered by Dr. Joshua Tucker, of Boston. It contained an account of important results of more than forty years' experience. Theories of decay and results from extracting teeth from crowded arches were among the topics discussed. Dr. Brackett, of Newport, followed with a paper on "The One Thing Needful to Preserve Fillings." Discussions followed on the subjects of the address and the essay. It was voted that the thanks of the Academy be tendered Drs. Tucker and Brackett for their valuable essays. The annual dinner was served at the Hotel Brunswick in the evening. The following officers were elected for the ensuing year: J. L. Williams, President; T. H. Chandler, Vice-President; J. T. Codman, Recording Secretary; L. D. Shepard, Treasurer; H. F. Bishop, Librarian; E. G. Tucker, G. T. Moffatt and F. N. Seabury, Censors; and C. P. Wilson, Corresponding Secretary.

#### TEXAS STATE DENTAL ASSOCIATION.

EARLY in December a State Dental Association was formed at Houston, Tex.,

when Dr. W. S. Curruthers, of Galveston, was elected President; Dr. C. B. Stoddard, of Austin, First Vice-President; Dr. S. E. Jones, of Houston, Second Vice-President; Dr. J. B. Chess, of San Antonio, Secretary and Treasurer; Dr. W. B. Clinton, of Waco, Corresponding Secretary; Drs. C. B. Stoddard, J. L. Fountain and W. R. Clinton, Executive Committee. It was decided that the first annual meeting of the society shall be held at Austin on the first Wednesday in May, 1881.

#### THE MEDICAL AND DENTAL PROFESSION.

WITH the very best of intentions, Dr. A. N. Roussel has just uttered a Cassandra-like wail before the Odontological Club of Philadelphia, and has kindly forwarded it to us. We give it to our readers this month with pleasure—not because we agree with all that he says (for we can scarcely say that we do), but because it is desirable that our worthy contributor's side of the question of the relations of the dental and medical professions shall have a hearing. The reader of a paper before the American Dental Association at Boston (Dr. L. C. Ingersoll) touched on the same subject, and while he admitted that such knowledge as is taught at medical colleges is indispensable for the dentists to possess, yet it would be well for dentists if they were content to stand on their own feet, and, instead of trying to fasten themselves to the medical profession, admit freely that they came, like Adam, out of the virgin soil. Dr. Roussel follows in the same line of argument. For something on the other side of the question we would refer our readers to the very sensible remarks made by Dr. W. C. Barrett, of Buffalo, at the American Dental Association meeting, which are given on page 9 of this issue of the MISCELLANY.

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*February*, 1881.—No. 86.

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## THE COGSWELL DENTAL COLLEGE TROUBLE.

IN the December number of the MISCELLANY we ventured to criticise the action of those dentists in the Far West who are throwing cold water on the charity of Dr. Cogswell. As we stated then, Dr. Cogswell has offered the dentists of San Francisco to found a college. It had been estimated that the building he offered was worth, as far as bricks and mortar were concerned, from \$10,000 to \$20,000. It was not to be supposed that anything we could say would turn from their somewhat thankless task the irreconcilables who, unlike most dentists, appear to desire to keep the profession down, educationally. We could only hope to encourage those who are fighting for more light, and at the same time inform our readers generally, who are scattered over this and other continents, as to the lack of a general appreciation in the Far West of that light which colleges alone in these days can disseminate, and which in the East is so much valued. Our efforts have, however, met with the thanks of some of our Western friends—those, it is needless to say, who desire to accept Dr. Cogswell's gift and make the most of it—and we are encouraged to return to the subject.

We have before us a private letter written by Dr. Cogswell and addressed to an esteemed Western correspondent of ours, who takes some little interest in promoting the rational and reasonable view of this question. With our correspondent's permission we quote some



figures and facts from this letter, which have not been published elsewhere, and which are at this moment very *apropos*. In May, 1879, Dr. Cogswell and his wife deeded to the Regents of the State (Cal.) University in trust, property in San Francisco which is now worth about \$60,000. When the deed was made competent, real estate judges estimated the property worth from \$60,000 to \$70,000. The main part of this property goes to found a chair of moral and intellectual philosophy. The remainder, it was intended, should be devoted to the establishment of a dental college and the founding of a students' relief fund. A large building situated in the older business part of the city of San Francisco, only 350 feet from the Post Office, was intended for the centre of this philosophic teaching and the dental college, the latter to have an upper story of the building, 85 feet by 60 feet, and more room than this, even, if necessary. The portion of the building to be devoted to the dental college would, too, be forever free of taxes, and, of course, rent. From investigations that our correspondent has carried on (and in him we possess the utmost confidence), we learn that the cash value of that portion of the building which it is proposed to hand over to the dentists is \$20,000, instead of \$10,000, as we stated in December. But the condition that the name "Cogswell Dental College" be affixed to the institution is too embarrassing for one of the professors-elect, and accordingly he uses his influence against it. Unfortunately that influence is of a very obstructive character, and has so far produced a deadlock.

To an individual who watches Western affairs from a distance, it would seem that California is greatly in need of a dental college, and, in fact, anything that will enlighten not only the profession itself, but the law-makers too. The State has no law to prevent incompetent quacks from practicing. In the *Dental Jaiurus* for January Dr. W. H. Robinson discusses the great want of legislation in the State, and how it is to be obtained. He very reasonably contends that it is of no use for a few of the education-loving members of the profession to go to the members of the Legislature and ask them to introduce and carry some such laws as those which exist in the Eastern States. They would immediately turn round and say, "Present your bill to the Legislature, indorsed by the profession, and we will give it support. But we can do nothing for it till it comes before us showing clearly and unmistakably that the profession indorses it." Now, cannot the opponents of Dr. Cogs-

well's scheme see that they are not only delaying the inauguration of a college, but that they are also doing all they can to perpetuate quackery? We do not suppose the professors-elect are quacks, but it does not require a vision of particular sharpness of penetration to see that those who do not want a college at any price are laughing in their sleeves at the thought that they have arrayed on their side men who are sufficiently exalted, professionally and educationally, to have been chosen as professors-elect. With a dental college comes an enlightened profession, and with an enlightened profession come laws which will strike at the root of quackery and incompetence. That man who, by his actions, aids in the dispersion of knowledge, especially when such knowledge is used in the relief of human suffering, is to be envied for the reward he receives in the satisfaction that he is helping forward the advance of humanity and the diminishing of ignorance, and of pain which inevitably follows ignorance. If the reward of such a benefactor is so great, the punishment of those who obstruct the spread of knowledge must be correspondingly great. Perhaps it may come in the shape of an execrated and despised name; perhaps in some other way. But as surely as the deed is done, so surely the punishment follows. The blunted sensibilities of some men—those, for example, who would disgrace any profession, those who love darkness rather than light—cannot be expected to allow their possessors to appreciate the piquant joy that follows the performance of an unselfish act. From such men we expect obstruction. But from men of a finer grade of humanity—men whose minds are expected to be of a different grain, owing to their education and their contact with a more refined society—men who are able to see that a dental college is capable of training students whose function and pride will be to war against disease and ignorance, and thus increase not only the wealth of the world, but the knowledge, the cheerfulness and happiness of humanity—from such men, we say, we expect something better, and we are disappointed when we do not meet with it.

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THE *New York Sun* affirms that Mrs. Lacey, a widow, of Savannah, Ga., who is over 90 years of age, is cutting another set of teeth.

GOLD AND RUBBER DAM.—A writer in one of the magazines says that, in his opinion, cohesive gold and rubber dam have done more toward the rapid advancement of operative dentistry in the last fifteen or twenty years than all else combined.

## TOOTH DEVELOPMENT.

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BY "B."

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THE author of this work\* modestly suggests that it may be of value to the veterinary profession and also to horsemen and farmers. We have no hesitation in going further, and affirming that it contains much of an instructive and interesting character for dentists, and all scientific and thoughtful men. The day has gone by when humanity laughed or grew angry (according to its temper at the moment) at the mere suggestion that man had any relationship whatever with the lower animals beyond that of his right to compel them into submission to his will, and to lead them to the slaughter-house. The movement of thought in the direction of Evolution is battled against by some very eminent thinkers to-day. Although the book before us does much to upset the arguments of these eminent thinkers, and to support the theory they denounce, and although there is much in the book with which we agree, we yet by no means pledge ourselves to Darwinianism. There is a middle position for those who neither agree with the old theory of a separate creation for every genus, nor with the development of all life from one germ form. The middle position we occupy may be described in the words of Tennyson as a "sunless gulf of doubt." But, after all, doubt is by no means always sunless; and, too, to admit a doubtful state of mind is at least to be frank, and we prefer it to being dogmatic on one side or the other—that is, to trying to goad others into a belief which we do not possess ourselves.

Even the man who believes in a separate creation for every genus cannot but admit that there is one principle—one common style of architecture, so to speak—pervading all classes of animal life. We see it in the structure of the teeth, arms, legs and wings of animals and birds everywhere. But, besides this oneness of principle, we see also a diversity, which it is not difficult to imagine has been in a great measure produced by changing conditions of existence. For the purpose solely of leading up to our later remarks we would here call attention to the fact which every one is acquainted with—

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\* HORSES' TEETH: A Treatise on their Mode of Development, Physiological Relations, Anatomy, Microscopical Character, Pathology and Dentistry, by Wm. H. Clarke, 82 Beekman street, New York.

namely, that the construction of a horse's teeth point to the inevitable conclusion that the animal is not a carnivorous nor an omnivorous animal, but a vegetarian. An interesting question presents itself in this connection as to whether the teeth of the horse have, through a series of eras, developed to their present condition because of his growing tendency to eat only vegetable food (which, of course, includes cereals), or whether the first horse was made pretty much like the horse of to-day, and took to vegetarianism simply because his nature and teeth demanded it. When we speak of this as an interesting question, we do not wish it to be understood that we at all doubt the tenability of the first position, although there are some people who may incline to the latter view. It appears to us that the results of scientific investigation among skeletons belonging to by-gone ages, point unmistakably to a gradual development of the horse as well as to that of other animals. As the volume before us affirms, for example, the canine teeth of the horse have been much reduced in size through successive ages, and, if Mr. Darwin's theory is correct, are probably in the course of ultimate extinction. It is not difficult to see why this reduction in size should have come about. Teeth, in common with all other parts of the animal frame, are being influenced continually by use—that is to say, on the same principle that a man becomes weak in the arms or legs if he allows them to become idle, the teeth also, if not called on to perform their proper functions, adapt themselves to new conditions. With the teeth the change is not so obvious to the eye, but it is no less certain. Now, the function of a canine tooth is to tear—not grind. If tearing work is not found for it, it cannot but lose gradually its individuality—that characteristic which differentiates it from the other teeth. If animals that now use their canines for the purpose of tearing flesh were compelled to subsist on vegetable food, there would, perhaps, be no marked change in their mouths in a generation, but there most certainly would in a long series of generations. Supposing the evolution theory to be true, then we see no great difficulty in concluding that the teeth of the horse have adapted themselves to a gradual but great change in its mode of existence, or, in other words, to a gradual tendency to depart from the original custom of subsisting on those kinds of food which demanded tearing teeth. But, taking our stand again on the spot where we announced ourselves before—that of doubt as to the Darwinian theory—we affirm unhesitatingly that horse dentures



have passed through great changes. Fossil remains would force this conclusion on us, however much we might desire to doubt it. But why should we have such a desire? To admit development is, say some, but the thin end of the wedge of Evolution. Be it so. It is the function of scientific wedges to split old and false notions, and who ever heard of a man putting the thick end of a wedge in first? Whether development is the thin end of the wedge of Evolution or not, we do not care much to inquire. If a man studies horses' teeth of to-day as well as those of human beings, he will come to the conclusion that in both there are signs of great development when compared with the teeth of thousands of years ago. He will observe not change merely, but signs of a higher order of being—signs of an evolution of the superior from the inferior.

To some persons Evolution is a bugbear, and the idea that human beings or the lower animals are capable of physical development is not much less. We advise such persons not to read Mr. Clarke's book. It would trouble them. They might cast it into the fire and thus waste the dollar it cost. But intelligent seekers after truth, those who may find the "gulf of doubt" in which they are floundering too sunless for their light-loving souls; those who are not afraid of meeting the doctrines and suggestions of scientific men face to face—such, we say, may read this work with profit. Without desiring to in any way disparage the scientific knowledge of its author, we may say that its chief value lies in the fact that it is composed largely of selections from men of special knowledge on the subject of the physiology of the horse and the horse's teeth. Much credit is due to him for collecting in so compact a form such a large quantity of valuable matter, which was scattered over encyclopedias, translations of learned societies, and other costly books.

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**BOLTING FOOD.**—There are some among us who think that the American habit of bolting indigestible foods and drinks—now hot and now cold—has done about as much to advance dentistry as anything.

**FEMININE WISDOM.**—In the London Board schools recently, a number of girls were examined on some physiological subjects. The answers contain some information new to American dentists. One said: "The loss of teeth is a serious matter, as we cannot *s-chew* our food enough." Another says: "Food has to be *jewed*, and *their* is a substance which helps to *jew* it, called saliva, and in that saliva *their* is a substance which is called *ptyalin*."

DENTAL EDUCATION.

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READ BEFORE THE NORTH CAROLINA DENTAL SOCIETY AT  
RALEIGH BY J. D. CLARK, D.D.S.

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*Mr. President and Gentlemen of the Association:* Although our subject is not a new one, yet it has ever been a favorite theme of discussion by societies and individuals. It has commanded, and will continue to command, universal attention, by reason of its paramount importance to the profession, being at the foundation of its honor and usefulness, and its defense against the inroads of ignorance, vice and quackery.

Education (derived from the latin verb *educāre*—to bring up, nurture, bring to maturity) is the development of the physical, intellectual and moral faculties of man, embracing all the means used to obtain this result from his infancy to manhood. Paley says: "Education, in the most extensive use of the word, may comprehend every preparation that is made in our youth for the sequel of our lives." Without going into a discussion of general education, but confining ourselves strictly to our subject, we will endeavor to point out a few defects of the present system of instruction and the remedy needed.

Dental education—which may be defined as embracing all the agents employed to develop man's faculties in the science and art of dentistry—is comparatively of recent origin. Notwithstanding the fact that, from the beginning of the Christian era up to the present century, much attention was given to dental literature by many of the fathers of ancient medicine, the present system of education is based upon data furnished by the research and investigation of those who flourished during the past century, and of many who are living to-day. It had its birth, so to speak, in this country, in the establishment of the Baltimore Dental College, which was chartered in the year 1839. From this time may be dated the wresting of dentistry from the hands of the ignorant and of those whose chief object was self-aggrandizement, and the opening of her doors to good men, many of whom to-day stand as beacons, brightening by the rays of their wisdom the path of those who are following in their footsteps.

Although rapid strides have been made in the past fifty years, still there is room for improvement in our system of education. It

is true that the time-honored custom of fitting pupils for college by a private instructor has many advantages, but the good done is, undoubtedly, far less than the evil. First impressions are the most lasting. The intimacy which exists between preceptor and pupil, the dependence of the latter on the former for direction and guidance in his studies, must necessarily create a feeling of perfect confidence in his teacher, and, by reason of this trust, he will (it may be unconsciously) adopt the manner of operating of his instructor, and be led in the same channel of thought. Thus are the errors of the one ingrafted in the other, which time often fails to eradicate. I believe that in this way has the canopy of darkness, which has shrouded so many points of vital interest to the profession, kept out the light of truth, which still shines, and is now ready, as she has always been, to reward man's labor, rightly directed, with the glory of her effulgence.

I should like to see abolished the present relationship of private preceptor and pupil, and one or two colleges endowed where the student might begin and complete his studies. Such a course is not at present practicable. How, then, are these evils to be guarded against and overcome? I answer—by each member of the profession discharging morally the duties which devolve upon him: first, as a member of the profession, and, second, as a teacher when he receives a student in his office to be instructed in the principles and practice of dentistry. Every member of the profession is morally bound by obligations which rest upon him to use his energy for the good of the profession. How many, I ask, pause and consider whether they are qualified to assume the responsibilities of teacher when application is made for private instruction? The fact of being well-educated, theoretically and practically, is not the only qualification required, but this, coupled with a natural gift of imparting instruction, is necessary to make a successful teacher. He who assumes this responsibility, and knows he is not fitted to discharge the duties which will be required of him, does both the profession and his pupil an injury. The mind of the pupil, which was eager to know the truth, is checked in its ardent pursuit after knowledge, becomes sluggish in its action, and places theory second to practice, thus producing a dwarfed and imperfectly-prepared student for college.

Again, how many make any inquiry whether or not he who desires private instruction is fitted by previous education and by nature

to successfully pursue the study of dentistry? Many enter the profession every year as pupils who are totally unfit to perform the duties which should be required of them, and some of these pass through college. Professional education must have a foundation upon which to be built. Do we expect a child to read before learning its letters? Yet we act as if we thought a man could master a science whose mind has never been strengthened and expanded by close application to commoner studies. The mind must be cultivated and developed in youth, prepared by a course of systematic instruction, if it is to receive a professional education—the foundation must be laid, and the broader and deeper it is, the more imposing will the structure be that is erected on it.

Mechanical genius must not be overlooked in our eagerness to secure mental culture, for without it no man can succeed at dentistry. It is a faculty which is born in the man, and it will develop itself in early life. It cannot be obtained by mental or physical labor. If the applicant possesses the most liberal education and the highest type of mechanical genius, and is devoid of morality, we should, unhesitatingly, deny him the privilege of entering our offices to prosecute the study of dentistry. I refer to that morality which recognizes man's accountability to his Maker—God. Without it a man is unreliable. Whether we acknowledge the fact or not, it is nevertheless true, that the honesty which is shown by man in his dealings with his fellow man is due to a recognition of the moral law.

I am glad to know that the profession are awake to a realization of the demands of the times, and by earnest co-operative labor are endeavoring to raise the standard of education. How willingly, then, should we be to labor harmoniously together, and to use all the means we have to perfect our system of education, knowing that the profession will then have a broader field for investigation and research, that success will attend our efforts to ameliorate the sufferings of mankind, and that honor will crown our labors.

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SINCE in childhood the first sufferings begin, in childhood also the foundation of a good or bad constitution is laid. It is at this critical time that the greatest attention should be paid to the state of the gums, to mark the protrusion of the teeth as well as the after-changes; for it is only by knowing the steps and order of their progress that proper aid can be given to the efforts of nature during the years of childhood.



20TH ANNUAL SESSION  
OF THE  
AMERICAN DENTAL ASSOCIATION.

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HELD AT BOSTON, AUGUST 3D, 4TH, 5TH AND 6TH, 1880.

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FOURTH DAY—FRIDAY AFTERNOON.

DENTAL ART. BY DR. E. M. FLAGG, NEW YORK.

*(Abridged.)*

A LOVE of art was born with our race, and has accompanied every movement that has brought comfort and happiness to man. It has shown the mechanic and inventor that if they would be great they must be more than artisans—they must be artists. This element—the element of art—wherever it enters the field of human life, has for its function to give finish and render attractive the hard labor that has gone before it. Nearly all the professions have had for their origin the desire to relieve some present distress, moral or physical, and it is only after this desire has been relieved that the element of art can enter and embellish that which was born of distress, and our profession has been no exception to the general rule. We see in the operation of gold filling that men of soul and genius are dissatisfied with the mere work of stuffing a cavity with soft foil which an excavator can penetrate to the very base, and they do not feel that the requirements of the case have been fulfilled until the mutilated organ has received the form which Nature gave it. Yet there was a time when this soft foil stuffing was supposed to subserve every purpose that could be required of gold filling. There are men to-day who, apparently, pray to be delivered from the impious wish to do any better than their ancestors did. \* \* \*

We find that the necessity for art in dentistry is more or less augmented according to the helplessness of the case. The greater the amount of loss of tissue, the greater knowledge of natural form is required for its replacement. Beginning with the restoration of portions of teeth by gold filling, we come to the loss of an entire tooth, and finally to the last resort—a replacement of the entire denture. Knowledge of form and color, expression, character and effect, now becomes an imperative duty of the dentist. To relieve the

condition of the patient, the arts of the sculptor and colorist must be studied with care, while knowledge of temperament and physiognomy becomes an important element in our work. We must study beauty to avoid ugliness, and nature to avoid the unnatural. The only way we can study Nature with satisfaction is to greet her with such earnestness that she will bestow on us her favors; copy and reproduce her forms as in any other department of art, and keep them carefully in our laboratories for future reference and study. If an irregular denture is to be made straight, there is often no greater help than a model taken from a plaster impression of corresponding size and age. If a complete denture is to be made, another model taken from a complete set of natural teeth from a person corresponding in age and temperament with the patient will lighten our task and furnish us with unwavering guides. These models are not difficult to obtain. A lady patient will often be complimented at being asked to give a sitting for an impression of her mouth, if she knows it is for the advancement of science and to assist in relieving her less fortunate fellow-beings. \* \* \* Students will do well to carefully collect models of this character, and study them. If they do this, the education received from studying them will never permit the acceptance of the china-ware for which (I say it with regret) a demand has been established at the dental depots. I have been struck with awe at the shapes of some of the bicuspid and molars exhibited for sale in the dental depots. I believe that, without an infringement of the decalogue, one might fall down and worship them, for really there is nothing like them in the heaven above, nor in the earth beneath, nor the waters under the earth. \* \* \* With a study of our art from natural models, we should never allow ourselves to make the first superior bicuspid smaller than the second, and the cuspid of the same shade with the rest of the denture. We should not permit ourselves to use molded sections which make our patients' mouths look pretty much alike, varying only in the different degrees of ghastliness. I sometimes think that our art could receive no better impetus than would be followed by the sudden destruction of every gum section in the country, for then the profession would be compelled to furnish their own ideas on expression to their patients, while now, in consequence of their inactivity in that direction, there has been great danger that, if the present system of gum sections is continued, they would have no ideas to furnish.

While we are on this subject, I may say that I have known in New

York City of dentists taking their patients to the depots and allowing them to select for themselves a set of teeth such as they would fancy, just as they would select a bonnet or a pair of boots. Much has been said about the effect of rubber to drag dental art from the position it held some years ago to its present degraded position. This is not the place here to discuss the question of materials. They belong more to the mechanical than to the artistic department of our work. But it is only due in justice to say that, from the process by which rubber is worked, it must produce a detrimental effect on the progress of anything artistic. The mold is destroyed by the process of boiling that it undergoes in the vulcanizer, and all opportunity of future study of the case is thereby lost. But this subject is so vast, that in a paper like the present we must be content to merely call attention to the necessities of a department that has long been neglected, and whose neglect has degraded the profession as artists in the eyes of the intelligent public.

#### SECTION I. —ARTIFICIAL DENTISTRY, METALLURGY AND CHEMISTRY.

Dr. C. S. STOCKTON, Newark, N. J., the Chairman of the Section, read a report from the Section, of which the following is an abstract : The Section has no report in chemistry or metallurgy, but is pleased to record a growing interest in the department of artificial dentistry that is encouraging. Dr. Kingsley, in his recent work on oral surgery, has called attention to the necessity in this department of our art assuming a higher position than is accorded to it in our profession. \* \* \* While the older methods of work have undergone no great change during the past year, we report improvement in the working of celluloid that renders this base more certain in its results. \* \* \* In the manufacture of teeth there is a decided improvement in the forms of the bicuspid and molars. Much, however, yet remains to be done in the way of improvement. The first superior bicuspid are still smaller than the second, and such an arrangement is contrary to nature. The cuspid are also manufactured of the same shade as the rest of the denture instead of being yellower, as Nature makes them. As many persons are advanced in years who require our service in this department, we would suggest to manufacturers of teeth that they represent the effect of wear on the cutting and grinding surfaces, and exhibit the effect of use often noticed on these surfaces. There are at present no such teeth to be obtained in the dental depots, so that, in cases where we require such teeth,

we have recourse only to means that will glaringly exhibit the artificiality of our work on the slightest exposure. A change in this respect is earnestly recommended. We would also call your attention to the new metallic base—Reese's gold alloy. This promises much in the way of accuracy of fit and better health of the mouth. With every encouragement to continued advancement in the department of Section I., this brief report is respectfully submitted.

## OBITUARY.

DR. S. S. WHITE.

The following is the report of the Committee on Resolutions, expressive of the sense of the Association touching the death of Dr. Samuel Stockton White:

He is not here in bodily presence, but he is here in the spirit and effect of the work he accomplished in the flesh. We miss him for the first time at this, our annual coming together, in sweet accord of fellowship. It is, therefore, fitting that we should record here and now a sense of our great loss—inflicted upon us by his advancement to better spheres and higher activities. He was with us from the beginning of our organization, the man of most potency in holding us together for the good of the whole by kindly consideration and justice of treatment of each individual. He was a man of quick apprehension, quiet demeanor, and of moral grandeur excelled by none. It is but recording the sentiments he entertained, to say that the excellency he maintained among us was the result of the daily consciousness of an over-ruling Power among men, obedience to whose behests ever brings the highest success in all the activities of earthly existence. He was our best example of the comprehension and practice of "the Gospel of Commerce." Overworked in mind and body, he has been cut off in the midst of a pre-eminently useful career, and we submit to dispensation that we have not the strength to acquiesce in; of which strength he was so full by reason of his devotion of all his energies to his ideal source of all Power.

*Resolved*, That a memorial page in our transactions be set apart for this.

W. H. ATKINSON,	G. A. MILLS,
W. H. MORGAN.	J. TAFT.
C. N. PIERCE,	

Passed by a rising vote.



DR. H. L. SAGE.

The Committee appointed to draft resolutions on the death of our worthy brother, Dr. H. L. Sage, of Bridgeport, Conn., presented the following report: It having pleased an all-wise Providence to call from the scene of his earthly labors and usefulness our esteemed brother, therefore *Resolved*, That the American Dental Association has learned with deep regret of the decease of our worthy brother. *Resolved*, That, in the death of Dr. Sage, the Association has sustained the loss of one of its most zealous members, and the community an excellent and useful citizen. *Resolved*, That we accord to his memory a heartfelt tribute of respect, and tender to his surviving friends our condolence and sympathy in their heavy bereavement. *Resolved*, That the Secretary be requested to send a copy of these resolutions to the family of the deceased.

J. H. SMITH,  
W. H. JONES.  
JAS. McMANUS.

This completed the business of the Conference, and it adjourned.

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### FIRST DISTRICT DENTAL SOCIETY.

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MONTHLY MEETING HELD JANUARY 4TH AT THE RESIDENCE OF  
DR. J. A. BISHOP, 32 WEST THIRTY-SIXTH STREET, NEW YORK.

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THE meeting was called to order by the President, Dr. J. W. CLOWES, at 8 o'clock.

### THE CUMMINGS PATENT.

A petition to Congress praying for the refusal of an extension of the Cummings Patent, if applied for, was signed by the members present, Dr. O. A. JARVIS having called the attention of the meeting to it.

### THE CLINIC.

Dr. C. F. W. BÜDECKER said that there was an attendance of between seventy and eighty at the Clinic. Dr. WATKINS filled a left upper bicuspid.

The mallet match was renewed, and gold was packed into some glass tubes that had been cemented into blocks of wood. The weight of the fillings had not been tested.

Dr. J. M. SMITH presented a man about forty-six years of age who had a fistulous opening on the middle part of the chin, and the

canal was found to go up into the bone. Dr. MILLS thought the cause arose from a dead pulp of the right lower canine, which looked somewhat discolored.

Dr. F. A. ROY presented a boy fifteen years of age with retarded mental development and a defective articulation, but he was not sure from what they arose.

#### MERITS AND DEMERITS OF THE VARIOUS FILLING MATERIALS.

The above subject was then taken up for consideration.

Dr. O. A. JARVIS said that, aside from gold, the members of the profession are at sea as to what are the best filling materials, and they seem to get a little more at sea every year. The minds of dentists are more unsettled on the subject, perhaps, than they ever were before. They are not always sure when to use and when not to use gold; but when they get to cements, phosphates and oxy-phosphates, it is a terrible muddle. He wished he had never done as much experimenting as he had. Sometimes articles are submitted to a dentist, and specimens exhibited which look very favorable, and the whole is backed up by the weighty name of some practitioner. The system of backing things received his hearty condemnation years ago, and now he would not believe anybody's recommendation, for he had become a perfect infidel in regard to such matters. On examination he generally found that there was no reason why the names he had referred to should have been subscribed.

His experience in regard to amalgams was, that while some do very well under general circumstances, he had yet to see one that had done well under all circumstances, or that any man could swear to. He had in his possession a book in which for twenty years he had recorded every operation he had performed, and that record bore out the statement he had made. He wished that certain amalgams could be recommended unhesitatingly, but men are far too careless in recommending them. The great bulk of amalgams should be thrown out of the market and utterly condemned.

In regard to oxy-chlorides and oxy-phosphates, he had never seen anything that preserved the teeth so well as the "Agate cement." Very often it proves to be an utter failure, but, as a rule, it is far more effective than any other that he had tried.

Dr. G. A. MILLS remarked that they know more about gold than any other filling, and it is a standard of itself. When they use other fillings it is more as a temporary matter. Amalgam, gutta-

percha and oxy-phosphates he regarded as auxiliaries which are valuable in their way. In amalgam there is a certain degree of permanency, but, concerning the plastic fillings which had come up lately, no really reliable deductions had yet been made. He had used a great variety of them, and to say that one is better than another he should have to explain why. There is a great deal in the method of mixing the filling, and he came to the conclusion that it is best to mix it in such a way that you can "squat" it in and let it alone. The less done with the filling after putting it into the cavity, the better. He had noticed, too, that in some cases where he had let the moisture on to the filling immediately after getting the first apparent indication of stiffness, it had worn as well in exposed places as in other cases where he had protected it from the moisture for a longer time.

Dr. E. PARMLY BROWN said that there are four kinds of fillings—gold, which occupied the place of the king; amalgam, which is the queen; artificial bone fillings, which may be said to be hanging around the throne; and gutta-percha, the god of the new departurists, which is the meanest of them all. If a temporary filling is needed, he considered that artificial bone is in many respects the best. It has often a beneficial medicinal effect on the teeth, but he did not know that gutta-percha had. The artificial bone fillings would protect margins, but he never saw gutta-percha fillings that would do that.

Dr. G. W. WELD said that, in his opinion, the mixing of phosphate and oxy-chloride filling was a very important question—more important than many people thought. The same might be said concerning amalgams, and, perhaps, the subject in that connection had not been dealt with as fully as it deserved. In October Dr. Bogue presented before the Society a new method, prepared by R. S. Williams, of presenting amalgams to the profession, consisting of a block of wood in separate divisions in which there were different proportions of mercury and amalgam. He (Dr. Weld) had experimented with amalgams, mixing them in different ways, and the result was very interesting in many respects. He came to the conclusion that if a certain amount of fillings which have been chemically prepared are subjected to a double quantity of mercury, and then half of the mercury is squeezed out, the result is different from that which follows mixing the filling with an ordinary quantity of mercury and squeezing none out. If mercury is squeezed out it carries some tin with it. He mentioned these experiments, as they had con-

vinced him that the mixing of both amalgams and oxy-phosphates should be closely studied.

Dr. CHARLES E. LATIMER believed very strongly in the superiority of gold as a filling, and, in more than half the cases he had, he used soft gold, finishing with adhesive. There was no doubt in his mind that amalgam comes next to gold, and if the cavities are prepared carefully, the color of the teeth can be preserved with amalgam. Amalgam should be well washed, as little mercury used as possible, and then, after putting in the filling, it should be pressed with a round burnisher and polished, and it will be found to be a good substitute for gold, if the amalgam is good to start with. Since the subject of filling was decided on for discussion at their meeting he found that he had eight kinds of oxy-chlorides and oxy-phosphates in use, and five kinds of amalgams. He advocated the use of oxy-phosphates and oxy-chlorides for the front teeth. The "Adamantine cement" works very nicely, and he thought from his experience that oxy-chloride wears a little better on the surface than oxy-phosphate.

Dr. M. H. WEBB said that he had not used any amalgam since 1876, and should not use any again. He regarded the next best thing to gold to be tin-foil. He liked oxy-chloride of zinc, and, for temporary purposes, gutta-percha.

Dr. G. S. MEIGS remarked, that he has a tooth which is so far decayed that rubber dam cannot be got on to it. It has some amalgam in it now, and he would like to know what it should be filled with.

Dr. WEBB said, that if rubber dam could not be put on it, then it was the first of its kind that he had seen for years. He would agree to put the rubber dam on it and fill it with gold.

Dr. MEIGS accepted the offer.

Dr. J. W. CLOWES did not think it was necessary for him to say that, in his opinion, amalgam is a good filling, for he had said it so many times. He was, however, quite ready to admit that a poor amalgam makes a miserable filling. For example, amalgams which contain cadmium are a great curse to the profession and the public. Cadmium will act on a tooth very much as a rat acts on cheese. Scarcely a day passes that he has not come under his notice teeth filled with amalgam containing cadmium, and the evil caused by it is very widespread. Men who are high in the profession, and considered first-rate authorities, use amalgam containing cadmium, and with deplorable results. But though he had a great deal to say in praise of amalgam, yet as a filling it is far surpassed by gold. There



is, however, this great difference between the two—any set of teeth can be saved with amalgam alone, but the same could not be claimed for gold alone. There are some cavities and positions in the mouth which cannot be reached for the insertion of gold fillings—that is the only thing against it. Amalgam is good and thoroughly reliable, and so is gold, and it is in their condemnation of these that the “new departure” men are wrong. He could not understand how men can use good amalgams, and have no confidence in them unless it is that they do not know how to apply them properly. He hoped that their discussion would give them some light on the subject. They should strive to get good material. He used Lawrence's amalgam, and thought that it was the best. He had, however, tried recently an amalgam made by Dr. Welch, of Vineland, and was very much pleased with it. It seems to hold its color well; it hardens quickly, and goes in with a velvety touch. His experience of it was not long enough to decide definitely as to its merits, but so far he considered it an improvement on everything he had tried.

The best phosphate he had used was Welch's, also. It works beautifully.

Dr. WELD said that he has an amalgam filling in his mouth composed of half Lawrence's and half Arrington's. It is on the posterior surface of the right inferior molar. It is as bright as nickel-plate, and is as good a filling as, in his opinion, was ever put in any mouth under any circumstances.

Dr. F. M. ODELL said that he never used oxy-phosphates or oxy-chlorides for outside fillings unless they were only required to stand a week or a month.

The meeting then adjourned.

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#### VIRGINIA STATE DENTAL ASSOCIATION.

THE annual meeting of the above Association was held in Richmond on the 15th December. There was a large attendance and a pleasant meeting. The following gentlemen were elected officers for the coming year: Dr. Geo. F. Keesee, President; Dr. J. P. Wood, First Vice-President; Dr. J. S. H. Henkel, Second Vice-President; Dr. Geo. A. Sprinkel, Third Vice-President; Dr. Jas. F. Thompson, Treasurer; Dr. H. C. Jones (Richmond), Recording Secretary; Dr. J. H. Moore, Corresponding Secretary; Dr. W. E. Norris, Reporting Secretary; Drs. W. W. H. Thackston, J. W. Scribner and L. M. Cowardin, Executive Committee.

## THE MASSACHUSETTS DENTAL SOCIETY.

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THE sixteenth annual meeting of the above society was held in Codman & Shurtleff's Hall, 167 Tremont street, Boston, on December 9th and 10th, 1880, the President, Dr. C. G. Davis, of New Bedford, in the chair. The reports of the various officers and committees were read and acted upon. The following committee on revising the Constitution and By-laws was appointed: Dr. L. D. Shepard, Dr. D. M. Clapp and Dr. C. H. Osgood. It was resolved that Herbert E. Dennett be expelled from membership in the Society. The following committee was appointed to apply to the Legislature for an amendment to the Society's charter: Dr. J. J. Wetherbee, Dr. T. H. Chandler and Dr. S. F. Stearns. Dr. H. A. Babner, Boston, read a very instructive essay upon "An Appliance for Congenital Cleft Palate," in which he gave some new theories of his own which had not before been given to the public. Dr. H. C. Merian, Salem, read an interesting essay upon "Artificial Crowns." The microscopist made a report, in which he advanced a new theory in regard to the formation of dentine. Dr. A. M. Dudley, Salem, who was unable to deliver the annual address, was chosen to deliver the same at the semi-annual meeting. A vote of thanks was tendered Messrs. Codman & Shurtleff for their kindness and generosity in allowing the use of their hall by the society free of expense. The following officers were elected for the ensuing year: President, Dr. G. F. Waters, Boston; First Vice-President, Dr. C. H. Osgood, Boston; Second Vice-President, Dr. H. F. Bishop, Worcester; Secretary (Recording and Corresponding), Dr. W. E. Page, Charlestown; Treasurer, Dr. E. Page, Charlestown; Librarian, Dr. J. T. Codman, Boston; Microscopist, Dr. R. R. Andrews, Cambridge; Orator, Dr. T. D. Shumway, Plymouth; Executive Committee, Dr. D. M. Clapp, Boston; Dr. R. R. Andrews, Cambridge; Dr. T. O. Loveland, Boston; Dr. A. B. Jewell, Newton; Dr. H. A. Babner, Boston.

W. E. PAGE, D.M.D., Secretary.

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THE editor of the *Annals of the Anatomical and Surgical Society*, Brooklyn, speaking of associations, writes: "We have the American Dental Association, with such wisdom as comes of craning over *dentes sapientiæ*." What is implied here is more poignant than what is said. Shall we say it is more untruthful?

## THE PROPOSED DENTAL CENSUS.

IN the MISCELLANY for January we referred to a circular that had been sent out from the Census Office to a number of New York dentists, demanding information as to their income, number of assistants, capital invested, and other matters. As we then stated, the Census Office withdrew their demand for this information on the 3d January in consideration of certain communications that had been forwarded to them by some members of the profession. Dr. Thomas Brian Gunning has kindly handed us a copy of a letter which he addressed to the Census Office agent, from which we make the following extracts, and which contain some of the chief reasons urged against the census of dentistry :

NEW YORK, *December 24th, 1880.*

TO CHARLES E. HILL, ESQ., *Chief Special Agent, Census Office :*

*Sir—*\* \* \* My opinions are radically opposed to what appears to be the settled purpose of the Census Office. \* \* \* In regard to what is now called for in the schedule left with dentists, it is both improper to ask and impracticable to answer : and, if the results obtained are embodied in the Census Report, it will excite ridicule and indignation ; whereas, by giving this up, the Census officers will be put to less trouble, much money be saved to the country, and the Census Report be more legitimate. This schedule and your letters to me demonstrate to my mind that the difficulty in the way of the Census officers is, that they do not comprehend the specialty of dental surgery. When its nature is shown to them, they will, I think, see that it is unwise, and also illegal, to demand statements from dental practitioners in respect to their professional doings.

You say to me, " The object of the inquiries submitted to you is to ascertain the amount of industry expended on the ' mechanical ' branch of dentistry, and the form of schedule has been approved by the Census Office." You then intimate that surgical operations may be excepted.

The word " surgery," derived from *chirurgia*, denotes handwork in connection with the art of healing, and this whether manual or instrumental, or both conjointly. *Orthopedy (medical)* is the art of curing or remedying deformities in the human body. *Prothesis*

(*surgical*) signifies the addition of some artificial part to the human body.

The agent of the Census Office, who called upon me, when saying I might except surgical operations, mentioned the extraction of teeth. Now, as the extraction of teeth is surgical, inserting artificial ones to be used by the patient is not only more useful, but also surgical, according to the import of the surgical terms hereinbefore presented.

Prothesis includes all forms of artificial teeth, with or without plates, and in every method of insertion, together with all constructions worn within the mouth, or any artificial addition to the human body. \* \* \*

Orthopedy includes appliances for congenital and acquired cleft palate, and for all malformations of the parts within and around the mouth, and for irregularity in the teeth, etc.

To apply splints within the mouth in fractures or resections of the jaws, or for any other purpose, with or without external appliances, or these latter also, is surgery.

The appliances made in the operating-rooms and laboratories of dentists which the Census officers class as mechanical, are made only after examination of the patient, or of the mouth or parts for which the appliance is needed. In some cases teeth, or other parts, require removal or some additions; such as fillings, alterations in form, extraction, the removal of diseased bone, etc., and the healing of the parts.

In most cases the appliance cannot be made except by the aid of casts or impressions; these are taken of or from each particular patient or person for whom the appliance is necessary, and without whose co-operation the work cannot begin, and when the appliance is finished, it is useless and of no value, except to or for that particular patient. These appliances are thus surgical—they are the results of diagnosis, prognosis and handwork combined to produce a useful result in, or appliance to or for, the human frame; this, even when no medicine is given or prescribed, is surgery.

In filling teeth, the result of the dentist's labor is the addition of artificial parts to defective organs of the human body, this addition to each tooth of a patient being, when completed, virtually a part of that particular person. Filling teeth is, therefore, a surgical operation. \* \* \*

Dentists, and other specialists of medical and surgical art who



stand in delicate and confidential relations to their patients and do for each one that which the case requires, should not be asked to report in respect to their professional doings, otherwise dental practitioners might be called upon to give information in regard to their professional treatment of any one of their patients.

I have presented enough to show that the dental surgeon cannot properly be subjected to investigation and annoyance in respect to his professional work any more than the surgeon in other specialties of medical art; and the agent from the Census Office said that no schedule was left with physicians or surgeons—that they, lawyers and professional men were not asked to report; and your letter intimates that for surgical dentistry no statement is required.

I therefore protest against the novel and unjustifiable demand now made for reports from dental practitioners.

I remain, Sir, your obedient servant,

THOMAS BRIAN GUNNING, D.D.S.

### ALLEGED BOGUS DENTAL DIPLOMAS.

AN esteemed correspondent, whose name we withhold for obvious reasons, has forwarded us a quantity of very interesting matter regarding the "Wisconsin Dental College," the headquarters of which are at Delavan. One circular is as follows:

#### "WISCONSIN DENTAL COLLEGE.

"This College is a regular organized corporation under the laws of Wisconsin and will be conducted with ability and integrity.

"The requirements for graduation relating to age and to practical demonstration of skill at the operating chair, and in the laboratory, are the same that are usually demanded by all reputable Dental Schools, except in this institution students receive Diplomas and degree D.D.S. for what they know and can do, and not for the number of terms spent at the College."

A letter signed by "Dr. GEO. MORRISON, President," addressed to a correspondent, we also give:

"DELAVAN, WIS., Dec. —, 1880.

"Dr. \_\_\_\_\_:

"*Dear Sir*—By mail I send you the Wisconsin Dental College announcement. Should you conclude to take a full or part of the term, we will give you practical instructions which will be to your

advantage. However, if you do not desire a College course, I take the liberty to make you this offer: Fill the blanks in the inclosed printed statement, and return. If satisfactory to the Faculty, will send you in a cylinder box by express, C. O. D. \$12.00, an elegant *Honorary Diploma and Degree D.D.S. (Doctor of Dental Surgery)*, with your name artistically hand-printed. This Diploma is 22x17 inches, elaborately engraved on *parchment*, with signatures of the Faculty and College Seal. Should you accept of this compliment from the Wisconsin Dental College, we shall expect your influence by way of assisting us to students in the future."

The "statement" referred to is as follows:

.....188

*This statement is made to the Faculty of the Wisconsin Dental College, located at Delavan, Walworth Co., Wisconsin, for the purpose of procuring an Honorary Diploma and Degree D.D.S. (Doctor of Dental Surgery.)*

*I am a regular practicing Dentist.*

*I am a resident of* .....

*age*.....*years. Have practiced Dentistry*.....*years.*

*Signature*.....

*Witness*.....

A college which conducts its business on such bases as are set forth in this letter and circular should have no chance of life in these days. The fact that such an institution does live is, as a sign of the times, by no means pleasing. It is very much to be wished that all dentists realized that solid attainments are indispensable to success, while "honorary diplomas," however "artistically hand-printed" they may be, even if they are "22x17 inches and elaborately engraved on *parchment*, and even if such words as "honorary" and "parchment" are italicized, are valueless except in practising deceit on patients. The functions of the dentist are not those of deceiving people, but of remedying oral irregularities and defects. It is well that all the professional quicksands extant should be known, and that those who

desire something more tangible than fine-looking parchment for their money should be warned in time.

In the DENTAL MISCELLANY for March, 1874, we felt it our duty to call attention to some of the doings of this Dr. Geo. Morrison. We then gave to our readers gratis what Dr. Morrison had charged one of our correspondents \$2 for—namely, a recipe for constructing plates for artificial teeth. At the time the recipe was pronounced a swindle by our correspondent, and now it would appear, from the foregoing, that Dr. Morrison, finding, perhaps, the sale of \$2 recipes slow, has embarked in the business of selling parchment at a large profit. We hope that the Wisconsin Dental College will be reformed by the force of public opinion. We do not say that it is not incorporated in accordance with the laws of Wisconsin; but we do say that, if such is the case, it is about time that the Wisconsin Legislature reforms its laws.

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#### AMATEUR DENTISTRY.

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THE English are a very practical people, and are never disinclined to turn or save a penny. There is a popular journal published in London called the *English Mechanic and World of Science*, and we imagine, from its contents, that it is read by some of the most practical of practical Englishmen. If a man wants to make a steam-engine, he has only to ask for information in its columns and he gets it gratuitously. If he wants to cure himself of indigestion in the most expeditious way (which, of course, would be to starve for a while and ever after avoid eating indigestible foods), he can learn the way in this journal. A correspondent of the *English Mechanic*, who adopts the somewhat appropriate *nom de plume* of "Dent," has been writing on the subject of "artificial teeth," and we should not be surprised if some day he gives the world a book with some such title as "Every Man His Own Dentist." If artificial teeth do not fit perfectly they can be made to do so by exercising a little ingenuity, without going to a dentist, and "Dent" tells us how. We give his ideas below, not because we desire the American public who possess artificial teeth to take the work of regulating them out of the hands of the dentist. Of this there is not much fear, for people generally in this country are willing to place special work in the hands of the specialist. We think, however, that our readers may gather something from the remarks of "Dent" which will at least be sug-

gestive. They do not contain much that is absolutely new, but his ideas are expressed in an intelligible form, and are practical :

“ARTIFICIAL TEETH.

“Some of your readers may be glad to know how ill-fitting artificial teeth may be made to fit perfectly with little trouble or cost. Even when quite perfect in the first instance, they often cease to fit owing to absorption and loss of substance in the gums, which takes place after extraction. It sometimes takes two years before the gums acquire their permanent shape or hardness. Get some common thick sheet gutta-percha (the hardest kind, some is too soft), cut two slips about two inches long, and say, half an inch wide : the width will depend on the amount of material required, to be ascertained by experimental trial. Place them in very hot water until quite plastic : have the upper set clean, put the slips (one each side) in the hollow into which the gums fit : place immediately in the mouth and close the teeth steadily and quickly to the natural position : then avoid further pressure until the gutta-percha is quite hard, which will be in four or five hours. If properly done, the gutta-percha will fold down over the outer edge of the vulcanite : this should be left along the molars to keep it steady, elsewhere pare it off with a pen-knife. If too lumpy toward the cheeks, etc., also pare it down ; also cut it so as to avoid touching any stumps or natural teeth remaining in the mouth ; sharp edges and roughness caused by paring can be removed by holding a lighted wax match to the place and drawing a wet finger over it and replacing it in the mouth. In order to adjust as above, the gutta-percha can be separated from the set. The upper set is very easily done : the lower takes a little more care. Have the lower set quite dry, and, on taking the gutta-percha out of the hot water, touch one side of it *slightly* to blotting-paper, then press it lightly into its place, and it will stick sufficiently to enable it to get into position in the mouth. It may be found more convenient to do one side of the upper on one occasion, and the opposite side on another, and similarly with the lower set. After some experimental trials, and (which is very essential) a little handiness in adapting it to the circumstances of the case, the above would be found very useful. The gutta-percha molds itself on the gums, and fits most comfortably with an even pressure. The gutta-percha shrinks in cooling, which should be taken into account in manipulating it.—DENT.”



DOMESTIC MOTORS.

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A SERIES of articles on domestic motors is now appearing in the *Popular Science Monthly*, written by Mr. Charles M. Lungren. The subject is one of some little interest to dentists, and we take this opportunity of giving some quotations from these articles. We would say, however, at this time, that we scarcely view the success which has already been attained in the manufacture of small motors with the enthusiasm shown by Mr. Lungren. The ordinary reader of his remarks is apt to get the idea that one at least of the several inventions he refers to is a domestic motor *par excellence*, notwithstanding his assertion, in opening, that the ideal motor has not yet been made. Our experience and observation lead us much further than Mr. Lungren goes, and convince us that a small motor which is at all practicable has yet to be made, and this notwithstanding the fact that some exceptionally skilled electricians have been able to get very fair service from some electric motors, of which our author treats in one of his later papers. But, in working these motors, not only is the skill of the electrician necessary, but a great deal of patience in manipulating the batteries.

Mr. Lungren opens his first article as follows: "The situations with which a motor of comparatively small power can be used with advantage, and with which it is a necessity even, are already very numerous, and are constantly increasing. Not only has it a proper place in the workshop, in the business house and on the farm, but in the household as well it has a wide range of utility. The need for such a machine in our houses, created by the sewing machine, has been strengthened and increased by various other appliances in use, or coming into use, while such devices as fans for cooling rooms in summer and ventilating them in winter further add to the requirement. In suburban and country residences, and on the farm, the primary need is for pumping water, and this alone renders a light and economical power almost indispensable. For the performance of most of the other mechanical operations upon the latter it is also of the utmost value. In the field of small industries the use to which such a motor can be turned are as numerous as the varied occupations of the workers. The necessities of numbers of amateurs further increase the range of activity for such a power. The kind of machine that is suitable to the varied needs of these different classes of users necessarily differs in each. In most trades the

demand for power is for one of from two to five horses and above, and on the farm a serviceable machine could not generally be much, if any, less, but in the household the demand is rarely above one-horse, and generally under it. A more complicated machine can, however, be used with success in the workshop than in the household, as in the latter it would generally be in the care of attendants but little, if at all, skilled in the use of machinery. Certain general conditions are, however, common to all. The work for which it is needed is generally of an intermittent character, and this necessitates a machine that will always be ready for work, or that can be made ready with but little trouble at short notice, and that is of no expense, or but very small expense, when not being used. It needs, further, to be perfectly safe, economical in use, of low first cost, and to require but little care, etc., of a kind which can be given by unskilled labor.

“The attempts to make a machine to answer to these varied requirements have been many, and they have been crowned with greater or less success. Though it cannot be said that the ideal motor has been produced, still there are at present made, and on the market, a number of machines of real merit, and some of great excellence, that are all well adapted to the needs and uses of light power, including the householder; while, in large manufacturing, only two machines—the water-wheel and the steam engine—can be used for this purpose. of these small powers the range is much greater. Wind and water, steam, hot air, gas and electricity are all suitable, and are all to a greater or less degree available.”

The writer then proceeds to describe the progress that has been made in a recent period to render the windmill an effective appliance by which man has sought to turn to his use the powers of Nature. He continues:

“While the windmill is peculiarly well-adapted for pumping and allied purposes, it is not at all suited to most of the uses for which a small power is required. Water-power, on the other hand, is admirably adapted to such uses. Water-wheels are simple, easily managed, and the most efficient of known motors. They are especially suitable for use in the household, and, where sufficient water can be procured under a proper pressure, are at once the cheapest and most convenient motor for the shop. Water-wheels of large power, such as are required in manufacturing operations, can only be used in particular localities; but those of comparatively

small power can, owing to the very general introduction of water under pressure into buildings in cities and towns, be used in very many places. As, however, the supply that most water-works are capable of furnishing is not at any time greatly in excess of the demand, wheels adapted for use upon house-pipes have to be, first of all, economical of water. They should also be constructed so that they are not liable to injury by water freezing in them, and be of low first cost. Several different wheels designed to meet these requirements are now made, and have been more or less widely introduced. One of the best of these, and one which has met with considerable favor in the market, is the invention of Mr. O. J. Backus.

\* \* \* The cost of operating these motors depends upon the locality in which they are used. In New York and Philadelphia the insufficiency of the water supply prevents their use at all, but at most other places in this country they can be used at but nominal rates. The average charge made by Water Boards is from \$50 to \$75 a year per horse power, while for those used on sewing machines the charge varies from \$3 to \$6. \* \* \* This price is, however, based upon a condition of water service which could not hold were the motors much more largely used than they are at present. The greatly-increased demand for water that this would make would necessarily raise the price charged, but it could be very much increased and still leave these motors the most economical of small powers.

"Another wheel of a somewhat peculiar construction, invented by Mr. Tally, is capable of being used either as a turbine or as an overshot. The water is applied in such a manner that it strikes the wheel in a thin sheet, the sheet being tabulated, undulating and wave-like in form, and impinging edgewise upon the wheel.

"For light pieces of machinery, such as the sewing machine, various sorts of spring motors have from time to time been devised, though none of them seem to have been brought into use. They are not properly motors, and are really quite valueless for the purpose of power, unless it be very slight, as that required in clocks. They are capable of giving out but a small amount of the power expended in winding them up, and as this labor has to be done by hand, are very uneconomical. A weight is a much better device, and yields a large per cent of the power expended in raising it when it falls. Such an arrangement is, however, a thoroughly impracticable one, as a simple calculation will show. It takes about 400

foot-pounds per minute to drive a sewing machine, so that to run one an hour a weight of one-fifth of a ton would have to fall sixty feet. The only practicable way of utilizing gravity for motive power is by the water-wheel, where the weight can fall continually, and the cost of raising it again is a minimum."

The writer next describes briefly the small steam engine. He continues:

"An engine of a very small power, and quite novel in construction, the invention of Mr. Charles Tyson, has very recently been brought out, which seems to be well adapted to driving such light machinery as sewing and knitting machines, lathes, scroll saws, fans, coffee mills, etc. It is quite safe, requires but little care, does not easily get out of order, and can be managed by any one capable of using a sewing machine. It is ornamental in design and handsomely finished, fitting it to be used in any room of a dwelling that is convenient. Those at present made are of about one-quarter of a man power (1,000 foot-pounds per minute), but larger sizes, adapted to a greater range of work, will probably be built, should the present machine prove satisfactory.\* Gas is used as fuel, but they can be made to burn either coal, wood or oil.

In speaking of hot-air engines the writer says: "Hot-air engines are broadly divided into two classes by the manner in which they use the air. In one class it is drawn directly from the atmosphere used and then discharged. In the other the same body of air is used continuously, being alternately heated and cooled. The latter class has the advantage of being able to use the air at a greater pressure; but they need a refrigerating apparatus, which is unnecessary with the first. \* \* \* One of the earliest hot-air engines to obtain a recognized place as a valuable aid to motive power was the well-known engine of Ericsson, which has long been on the market and which has come into somewhat general use. It is of the class using a fresh charge of air with each stroke, the air being drawn into the cylinder, compressed, heated, and, after doing its work, discharged. The engine is made both for pumping and power, and is constructed in sizes up to four-horse." The writer then goes on to describe at some length a new engine, designed for pumping pur-

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\* We would say that we have tested one of these motors, and find that, for working the dental engine, it would be necessary that the gas be extremely good and the engine in first-rate condition, if it is to furnish the required power.—E. J. D. M.



poses exclusively, which has been perfected by Mr. Ericsson, and is now being manufactured. In his third paper Mr. Lungren deals with electric motors and gas engines, among which, as we have intimated above, the ideal motor has by no means yet made its appearance.

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## EXTINCT TOOTHED BIRDS.

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(*From Nature.*)

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AMONG the organic wonders of which from time to time during the past decade announcements have appeared, none have been received with more interest than the discovery of birds with teeth, made by Professor Marsh near the end of the year 1870, in the middle Cretaceous rocks, which in Kansas and Colorado spread out eastward from the base of the Rocky Mountains. So perfect a matrix do the peculiar buff, chalky or marly beds of the Kansas middle Cretaceous formations furnish for the preservation of organic remains, that almost every bone of the skeletons of some of the birds has been recovered. The material for the study of their osteology is thus almost as ample as that of any living bird. Full advantage of this abundant store of material has been taken. The cases and cellars in the Peabody Museum at New Haven contain the remains of about fifty different individuals of a single bird. Every bone of its skeleton, with the exception of one or two terminal toe-bones and the extreme point of the tail, has been recovered, and is here carefully drawn of the natural size. Never before has it been possible, we believe, to reconstruct so perfectly so ancient an organism.

The volume is divided into two parts. In the first of these the detailed structure is given of the bird on which the author has bestowed the name of *Hesperornis*. The skeleton of this animal if extended to its full length would measure about six feet from the point of the bill to the end of the tail. It must have been a typical aquatic bird, without any power of flight, but with strongly-developed limbs and a long, flexible neck, whereby it was doubtless endowed with remarkable powers of diving and swimming and of seizing the abundant fishes of the shallow seas in which it lived. Compared with our modern birds, the two features of this ancient form which most forcibly arrest attention are the teeth and the legs. The teeth were covered with smooth enamel, terminating upward in conical pointed

crowns and downward in stout fangs, closely resembling those of mosasauroid reptiles. Their mode of growth and replacement have been determined to have taken place in a manner very similar to that in some reptiles, the young tooth forming on the inner side of the fang of the tooth in use, and increasing in size, while a pit for its reception was gradually made by absorption. The old tooth, being progressively undermined, was finally expelled by its successor, the number of teeth thus remaining unchanged. The teeth were implanted in a common alveolar groove, as in *Ichthyosaurus*. In the upper jaw they were confined to the maxillary and entirely absent from the pre-maxillary bone; in the lower jaw they extended from near the anterior extremity of the ramus along the entire upper border of the dentary bone. Mr. Marsh believes that they were held in position by cartilage which permitted some fore-and-aft movement, but on the decay of which after death the teeth readily became displaced and fell out of the jaw. This is an important fact in its bearing upon the nature of the teeth found on the same slab of Solenhofen limestone with the well-known *Archæopteryx*. These teeth, it will be remembered, were referred by Mr. Evans to the bird itself—a reference fully confirmed by Mr. Marsh, who says that he at once identified the teeth as those of birds and not of fishes, and by the subsequent discovery of other remains of the bird. In *Hesperornis regalis* there appear to have been fourteen functional teeth in the maxillary bone, and thirty-three teeth in the corresponding ramus of the lower jaw. The wings are rudimentary or aborted, a remnant of the humerus alone existing. They may have gradually diminished from disuse until, as the power of flight ceased, the legs and feet increased in proportion, and assumed the massive dimensions shown in these specimens, or, as Mr. Marsh suggests, the bird may have been a carnivorous aquatic ostrich, never having possessed the power of flight, but descended from a reptilian ancestry, which is strongly recalled by different portions of the skeleton. Among recent birds, the peculiar legs and feet of *Hesperornis* find their nearest analogues in the Grebes of the genus *Podiceps*. They were admirably adapted for propulsion in water, but scarcely served for walking on land. Locomotion must have been entirely performed by the posterior limbs—a peculiarity which distinguishes *Hesperornis* from all other aquatic birds, recent or fossil. The tail appears to have been composed of twelve vertebræ, unique in their peculiar, widely-extended, transverse processes and depressed horizontal

plowshare bone. Broad and flat, somewhat like that of the beaver, it must have been a powerful instrument in steering the bird through the water.

The second part is devoted to a description of the remains which have been found of birds belonging to a second order of Odontornithes, termed *Odontotormæ*. Unlike *Hesperornis*, they seem to have been all of comparatively small size and to have possessed powerful wings, but very small legs and feet. From that contemporaneous form, and from all other known birds, recent and fossil, they are distinguished by certain types of structure which point back to a very lowly ancestry, lower even than the reptile. Their bones, being mostly air-filled, would enable the carcasses to float on water until, by decay or the rapacity of other animals, they were separated and dispersed. Hence skeletons of these flying birds are less entire than those of the massive-boned *Hesperornis*. Nevertheless, the remains of no fewer than seventy-seven different individuals have been disinterred. These are included in two well-marked genera, *Ichthyornis* and *Apatornis*, and were all small birds, reminding us by their strong wings and delicate legs and feet of the Terns, like which they were probably also aquatic in habit. Besides the reptilian skull and teeth, the birds of this second order were marked by the character of their vertebrae, which in their biconcave structure recall those of fishes. This is the more remarkable, as in *Hesperornis* the vertebrae are like those of modern birds. Yet these two utterly dissimilar types were contemporaries, and their remains have been preserved in the same strata. Mr. Marsh points out that the transition between the two vertebral types may be traced even in the skeleton of *Ichthyornis* itself, where the third cervical vertebra presents a modification in which the ordinary avian saddle-shaped form appears as it were in the act of development from the biconcave ichthyc form.

The man who knows only his own specialty does not know that thoroughly. Dentists must be something more than respectable jaw-carpenters.

"It is a religious precept," says Tournefort, "among the Mussulmen, to make the little ablution with the face turned toward Mecca, to rinse the mouth thrice, and clean the teeth with a brush." This shows how highly this custom is esteemed among a people who formerly were forbidden to have a tooth extracted without permission from their ruler.

## FIGHTING AGAINST NABOLI.

*To the Editor :* It would be interesting to hear some one account for the determined opposition that exists in some quarters against the obtundent known as "Naboli." Local societies, and even so erudite and formidable a body of men as the American Dental Association, hurl their wordy shafts at the makers of this article as though its object was to produce pain, instead of lulling it. It seems to me that the discovery of some preparation which shall lull pain in teeth when they are being filled is very valuable, provided that preparation does not in any way injure the tooth or filling. The makers of Naboli claim that they have made such a discovery, and they have, therefore, put it on the market. The opponents of what they call "quackery" do not affirm that the Naboli is not an obtundent of pain, nor that it injures the tooth or filling. Some of them wax warm in their local society meetings in denouncing it, because the makers do not say of what they make it, while others denounce it because they are unaware as to what will be its effect on the teeth. These objections appear to me to be very puerile. In the first place I would say that, if they read the MISCELLANY, they will have seen, in the report of the proceedings of the American Dental Association at Boston, of what Naboli is made. As to its effect on the teeth—let them get the preparation analyzed, and then, if they have something more than a smattering of chemistry, they can work out the problem themselves. While a license was required from all users, it was not strange that the profession, which has had so much injustice done it under cover of the patent law, should resist the connection of Naboli with the Patent Office ; but, as the manufacturers have now put it on the market in the ordinary way, this original obstacle is removed. Considering that Naboli is used for the relief of pain, it certainly should not be met with wholesale denunciation, or, in fact, any denunciation from those who know practically nothing about it. Those who so meet it without inquiry will, if they are not careful, be charged with indifference to the pain they cause their patients. Yours, etc.,

X.

[NOTE.—Our correspondent informs us, and we know it to be a fact, that he is in no way connected with the Naboli Company, and has approached this matter only as one who is naturally interested in the alleviation of pain.—ED. J. D. M.]



## PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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A PAPER on "Climate, Food and Associations in their Relation to Tooth Structure," read by Dr. James Truman before the Odontological Society of Pennsylvania, appears in the current number of the *Dental Cosmos*, and a very interesting paper it is. The fact that it is somewhat discursive is excusable, for the writer has a habit of making very good and suggestive discursive remarks on some subjects that are as interesting as those which the title would lead us to look for. He draws comparisons, for example, between the square shoulders and broad hips of the Teuton and the sloping shoulders and graceful lines of the form of the American-born. From this comparison he comes to the conclusion that "slowly but surely we are growing a type of men and women that in time will be a distinct race, grafted on old stocks, but molded by climate, food, natural associations, and the law of harmonious development into a class—whether superior or inferior, at least widely different from all others." Lacking that modesty which Dr. Truman seems to possess, I will state fearlessly, that in my opinion the new "class" will be superior—vastly superior to the old. Under certain conditions it is quite possible for the human form to change in the direction of retrogression. This would be effected if, for a few generations, we lived under conditions similar to those under which savages exist. But when there is change that is contemporaneous with an advancing civilization, then that change must necessarily be in the direction of an emerging of the superior from the inferior. The decriers of certain inevitable objectionable accompaniments of civilization may shriek themselves hoarse if they think it will pay; but they make a mistake in charging these accompaniments on civilization. The so-called evils which attend advancements of any kind are chargeable on the backwardness which exists—not on the advancement which is being made.

But this subject of advancement is so interesting that it leads me away from the question with which Dr. Truman deals. In the concluding paragraph of his paper he says that perhaps the thoughts he has thrown out may lead to no conclusions; but I maintain that they do lead to a conclusion, and to a very important one. They show that civilization is not a process of destruction to the dental organs.

If it were, then it would also tend to the destruction of other organs of the body. But it does nothing of the kind. The great danger is, that those who take their place in an advancing civilization will mistake demands of their nature for demands of barbarism or semi-civilization. They are likely to mistake the suggestions of artificiality for the demands of civilization. Herein lies a great deal of the trouble which exists in the world with decaying teeth and numberless other physical troubles. When the human race shall have caught up in practical knowledge of physiology with its knowledge in general science, we may then expect greater perfection in natural human dentures.

In the *Dental Advertiser*, Dr. F. E. Howard, who announces himself as a "new departurist," has a very intelligent, and, at the same time, moderate article on the issue between the party to which he belongs and the profession generally. There is nothing in his article at all extreme; no wholesale denunciation of gold as a filling for teeth, and, too, no wordy condemnation of those who use gold. Really, if Dr. Howard's position is that of a genuine "new departurist," there is but little, if any, difference between him and those who profess to oppose Drs. Palmer, Flagg and Chase. For example, Dr. Howard says: "I recognize gold as superior to all other material [as a filling for teeth] that we have at our command, if skillfully manipulated." How can the writer of the above words be in the same boat with Dr. Flagg, who uses no gold at all? Dr. Howard contends that poor, soft, or imperfectly calcified teeth cannot be filled satisfactorily with gold, and if they are filled, the result will not be permanent. It is on this point that he would differ with some of the followers of the orthodox school, one of whom said, at a meeting in New York recently, that a cobweb could be filled with gold. While this gentleman did not mean his words to be taken literally, he did mean it to be understood that, in his opinion, no tooth was too fragile to be satisfactorily filled with gold. Dr. Howard would recommend some other filling in such a case. Summarized, his advice would be to use gold in cases where it is the best filling, but be careful not to use it blindly and slavishly, for in some cases oxy-phosphates are better.

To an ordinary American dentist it is inexplicable that in any civilized land it should be necessary to champion the dental engine or advocate the use of gold foil as a filling. The *British Journal of Dental Science* contains an article by Mr. Musgrave, in which he

"defends" the dental engine, and refers to some old practitioners, who say that they would not use it on any account because of the torture it inflicts on patients. In the same article Mr. Musgrave deals briefly with the relative values of gold and amalgam as filling for decayed teeth, and from his manner we learn that among the bulk of English dentists the old prejudice in favor of amalgam is nearly as strong as ever. Is it that they do not possess sufficient skill to use gold?

The same journal contains some "American Notes," written evidently by a resident of the United States who is imbued with somewhat strong English prejudices. Among other things he refers to "bad habits among American dentists," the worst of which, he seems to think, is that of chewing tobacco. He affirms that, "before American dentistry can boast reasonably of supremacy, it must purge from itself men who, by virtue of their nastiness, are a disgrace to the profession."

*Correspondenz Blatt für Zahnärzte* is as attractive in appearance, and as well printed and illustrated as ever.

In the *Independent Practitioner* Dr. H. L. Byrd (the senior editor) deals with the "prehistoric races of men," and comes to the conclusion that the "Bible and science, when carefully compared with reason and common-sense, will clearly show that the human race had not one only, but several, if not many, distinct and separate foci of creation." In other words, Adam was not the first man, but was, so to speak, a supplementary creation—the father of the Jews. With all respect for Dr. Byrd, I think that the idea that men are all developed from a few specimens of protoplasm is just as tenable as that there were "several, if not many," separate creations.

California is a very long way from New York, but it is not too far for our sympathies to reach. Dental legislation in the auriferous State is at a low ebb—so low that it is difficult to see any ebb at all. The members of the profession have left the matter to the State Dental Association, and Dr. W. H. Robinson, in the *Jairus* lying before me, affirms that all the Association has done has been to talk a little about the matter annually. Feeble efforts have been made by it again and again to introduce some sort of a bill, but so far it has done nothing. Let us hope that it will soon get some new life infused into it.

The subject of clinical teaching in hospitals has just been under

discussion in England, and we find a statement or two in the *Monthly Review of Dental Surgery* concerning this subject which somewhat startled us. Mr. Oakley Coles, in a paper which he read before the Dental Students' Society of the National Dental Hospital and College, made the following statement: "I believe it to be simply a fact that if a student chose to come to a hospital and break off every tooth he attempted to abstract, and destroy every cavity he attempted to fill, and did this for the minimum amount of the time required by the various corporations, the staff would have no alternative but to sign his schedule when he demanded it. While, on the other hand, if every member of the staff chose to display his clinical wisdom simply by his sagacious silence, no one could legally (though they might morally) assert themselves injured. These two extreme statements show that clinical work is, in dental hospitals at any rate, to a large extent voluntary work, not only on the part of the teacher, but also on the part of the student." This is a state of things which is far from blissful, and our English friends would do well to find a remedy for it speedily.

A Glasgow L.D.S. writes to the above journal reminding dentists that all respectable practitioners can, up to August next, obtain their L.D.S. degree at Dublin, Edinburgh or Glasgow, *sine curriculum*. Although the examinations they will have to pass are of a practical character, they are by no means severe for those well up in the profession. Unfortunately, there is a disposition on the part of dentists to be apathetic on the point, and many will rouse themselves when it is too late to find that the door is closed, and that their opportunity of securing this degree is passed.

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#### BOOK RECEIVED.

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PHTHISIS PULMONALIS, AND ITS TREATMENT IN HYPO-PHOSPHITES. By L. De Bremon, M.D. Published by John Newton, 36 Beekman street. A valuable pamphlet for physicians.

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#### OBITUARY.

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ON the 29th January Dr. J. C. Dwell, of Schenectady, N. Y., died, in the 65th year of his age. He was a practitioner of thirty-seven years' standing, and was universally respected.



## THE CUMMINGS PATENT.

WE have had our attention called to the fact that petitions are being signed all over the country by dentists in opposition to the renewal of the Cummings patent. We have taken pains to make some inquiry as to the position of affairs in this matter, and find that hitherto no application for a re-issue of the patent has been presented. We have made such arrangements that, should any application be made, notice will be given us and we will inform our readers through the MISCELLANY. We would say, however, that it is practically impossible for any action to be taken during the session of this Congress which closes on March 4th, as they have been compelled already to hold night sessions in order to get through with their business.

## ADDRESS TO THE TOOTHACHE.

[We have a faint remembrance of one of our contemporaries being somewhat offended some time back with the character of a piece of poetry that we presented to our readers. We give below something which can offend no one on the score of inferiority, and we hope that our sensitive and critical contemporaries may be pleased. —EDITOR J. D. M.]

My curse upon your venom'd stang,  
That shoots my tortured gums along,  
And through my lugs gi'es money a twang  
    Wi' gnawing vengeance,  
Tearing my nerves wi' bitter pang  
    Like racking engines.

When fevers burn or ague freezes,  
Rheumatics gnaw or cholic squeezes,  
Our neighbors' sympathy may ease us  
    Wi' pitying moan ;  
But thou—the hell o' a' diseases  
    Ay mocks our groan.

Where'er the place be priests ca' hell,  
Whence a' the tones o' misery yell,  
And rank'd plagues their numbers tell,  
    In dreadfu' raw,  
Thou, toothache, surely bear'st the bell  
    Amangst them 'a.

—*Robert Burns.*

DR. C. S. STOCKTON says that a man eighty years of age now is a condensed Methuselah.

## NOTES.

### TO OUR READERS.

We pride ourselves on one or two new features introduced into the MISCELLANY, and particularly direct attention to the amount of original matter in this number. We think the "Peeps into the Magazines," by "Alert," a regular feature in the journal, will prove especially interesting and profitable. We have also arranged for a monthly European letter, which will appear monthly hereafter.

### A NEW DENTAL JOURNAL.

We have pleasure in announcing that on the 15th of February there will be published by Messrs. Ransom & Randolph, of Toledo, O., the first number of the *Ohio State Journal of Dental Science*. It will be edited by Dr. Geo. Watt, of Xenia, O., and is to be issued bi-monthly. Ohio is a flourishing State, and we have no doubt the new journal has a useful future before it. We wish it success.

### ADVERTISING DENTISTS.

Our readers may not be aware of the fact that there is far more advertising done by dentists in England than in this country. We state it as a fact, and not for the purpose of drawing any conclusions which would be prejudicial to our transatlantic friends. One of the most disgustingly realistic sights that meets the eye, not only in London, but in nearly every large and small town in Great Britain, is a glass case before some dentist's office, containing sets of teeth, which are opening and shutting more or less vigorously, being moved by mechanical apparatus at the back. It is fashionable in this country to talk about dentists being artists. Surely men who use such detestable means of attracting crowds as this have

never yet realized that a dentist is capable of an artistic idea. An exhibition of rows of naked teeth moving up and down in a glass case is about as near barbarism as anything connected with dentistry can possibly be. This is an objectionable form of advertising with a vengeance. But another idea, worthy in its originality of a Yankee, has struck our English friends. Toothpicks handed you at a London restaurant will in all probability have a dentist's name emblazoned on them. Advertising in newspaper columns is not unknown among us even, and this form of making oneself known is a favorite with the English dentists. They will grow out of this one day, and it is not too much to say that American example will have done something to push on reform among them.

### ASSOCIATION OF SURGEONS PRACTICING DENTISTRY (ENGLAND).

AT the meeting of this society in London, in December last, Mr. Edmund Owen read a paper on "Maxillary Abscess and Necrosis in Childhood," and stated that the question he desired to suggest for discussion was this: "Is it right to refuse to extract a carious and aching tooth on account of the acuteness of the periosteal and maxillary inflammation which its presence has excited?" He felt that the knowledge of general surgeons on this point was by no means definite, involving, as it does, pathological and surgical principles of great importance, and he was anxious to get the opinions of those present, since he held that no surgeon should ever refuse to remove a tooth which is the cause of acute inflammation for the simple reason that the local disturbance is excessive. The President and others who joined in the

discussion were of opinion that, in cases of the nature referred to by Mr. Owen, it was always well to remove as soon as possible the offending cause.

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#### THE DENTAL ENGINE IN AURAL SURGERY.

It is gratifying to learn that our English friends estimate at its true value the American dental engine. Dr. Geo. B. Field, Aural Surgeon at St. Mary's Hospital, London, writes to the *Lancet* in praise of the dental engine in the treatment of ivory exostosis in the ear. So far as he knows, it is the only instrument which will penetrate with any certainty such hard and unyielding growths of petrous bone. Toynbee and others consider that these growths are invariably found in gouty and rheumatic subjects, while other authors, such as Triquet, think they are only seen in syphilitic patients. Dr. Field thinks they are more often due to a chronic inflammation of the walls and the external meatus, such as might be produced by sea-bathing. In describing the operation of the removal of the ivory exostosis, Dr. Field says: "Having placed the patient under chloroform, I proceeded to make a thorough examination. With the aid of a probe I found that the tumor arose from the anterior wall and near the orifice of the meatus, which it all but filled up. I then proceeded to use the dental engine, making a small hole in the base of the tumor close up to the anterior wall. I then seized it with a strong pair of dressing forceps, and with little difficulty took it entirely away. The whole operation lasted about fifteen minutes."

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#### ANCIENT DENTISTRY.

ONE of the subjects which is now exercising the ingenuity of the gentlemen who compose the British Odontological

Society (says the *New York Times*) is whether the art of stopping teeth or binding them together was known to the ancients. The discussion is still being carried on in the *British Medical Journal*, and up to the present moment it would appear that the argument leans in favor of the dentistical skill of our progenitors. Sir Gardiner Wilkinson affirms that teeth stopped with gold have been found in Egyptian mummies, and other learned gentlemen hold vigorously that the thing is an impossibility. Dr. John Gaigor, in joining the interesting discussion, says that in the Etruscan Museum of Corneto, the ancient Tarquinia of Etruria, and a few hours' distance from Rome, he has seen teeth in a skull bound together by threads of gold cleverly twisted in and out among them; and that he has seen the same thing in museums in the Vatican and elsewhere. From these facts he presumes that it is quite probable the ancient Egyptians had more or less skillful dentists. His deduction is rather supported by a gentleman who is positive that he once saw in the Meyer museum, in Liverpool, the jawbone of a mummified Egyptian in which a number of teeth were secured by a golden wire. It is also claimed that the Hindus, 600 years ago, knew something about the art of binding together teeth that were disposed to abandon each other's company. Mr. Briggs, in his "Rise and Fall of Mohammedan Power in India," describes a battle in which Kootub-ood-Din, the famous General of Mohammed Ghory, who built the Kootub, a tower which rises near Delhi to a height that makes it one of the most beautiful wonders of the world, slew with an arrow a powerful Rajah, whose corpse was afterward identified, according to the writings of Ferishta, by his artificial teeth, which were bound together by wires of gold.

JOHNSTONS'

# Dental Miscellany.

VOL. VIII.—*March*, 1881.—No. 87.

## THE POLITICAL ECONOMY OF DENTISTRY.

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BY "B."

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DID it ever occur to my readers that there is a political economy of dentistry? John Ruskin pointed out, years ago, that there is a political economy of art, and why should not the political economy of dentistry be pointed out also? Political economy is thought to be a dry subject. Adam Smith's "Wealth of Nations" is not a particularly sprightly book. John Stuart Mill's "Principles of Political Economy" is, to put it mildly, abstruse. Mill had a very straight face, and it was straight when he wrote his famous text-book. George—our own American George—has dealt with the subject in a somewhat more entertaining fashion. He has done for this recondite subject what Justin McCarthy has done for recent English history. He has written a book which, although it may be outlived by Mill's deeper work, and by Adam Smith's labored "Wealth of Nations," yet serves a purpose. People will read George who would avoid political economy altogether if they could not learn something about it in popular phraseology. Justin McCarthy's "History of Our Own Times" (which, of course, has nothing to do with political economy—I only refer to it by way of illustration) will be forgotten, while Macaulay, Knight and Bancroft's names are still fresh. But it is written in so fresh a style that many people read it, and thus acquire a knowledge of the history of their own time, which they



would go without if Justin McCarthy had not lived, and labored with his pen.

But to popularize political economy is not my forte, especially in the pages of *JOHNSTONS' DENTAL MISCELLANY*. My intention is to attempt to trace its connection with dentistry, while, at the same time, I desire to say most emphatically that political economy is not, *per se*, a dreadfully dry subject. There is something most fascinating in its study, and, if the dentist takes it up, his mind will instinctively turn to its connection with his work. Political economy is a science, a title of whose ramifications has not been written about, and I am inclined to believe that I am now breaking virgin soil in writing about the links that connect it with the work of the dentist. Political economy has to do with all professions and trades connected with which are labor, wages, wealth, capital. These are the watch-words of the science.

A preliminary axiom or two which float about in the mind of the student of political economy must be stated here. In the first place we must disabuse our minds of the falsity that money is wealth. In other words, the wealth of the political economists is not money. Wealth is the product of labor, and can nearly always be classified under the head of necessary, useful or desirable possessions. There are some necessary, useful and desirable things which are not wealth. For example, air, and, under certain conditions, water. Though air is as necessary to life as food, yet it is not wealth, because no labor has to be expended in procuring it. Water is a form of wealth in cities, where labor has been expended in bringing it to the consumer; but in the country, where the natural spring pours forth the clear liquid at the cottage door, it is not wealth, because no labor is expended in producing it. The inhabitants of the civilized world are all bending their energies in the direction of the production of wealth. The man who invents a machine profits by it because it produces a particular form of wealth at a much more rapid rate than it could be produced without some such machine.

Another axiom—Everything which tends to the conservation of the physical strength of man is indirectly productive of wealth.

We may divide, broadly, labor of all kinds into two classes—re-productive and non-reproductive. The labor of the mechanic is re-productive because it produces machines, etc., which in their turn are used in the production of more wealth. The labor of the farmer

and his men is reproductive because it produces food which produces physical strength in man, which in its turn goes to produce more wealth. The labor of the literary man, the artist, the musician, is reproductive in a different and higher sense. They produce food for the intellects of their fellows, and thus by some occult connection between mind and matter, the intellectual, the mental and the moral temperature of the community is raised by their energies. As an illustration of non-reproductive labor I would refer to the cultivation of tobacco. Men who till the soil for the cultivation of this weed, who work at a tobacco factory, who stand behind the cigar counter—all are engaged in non-reproductive labor, simply because tobacco, when smoked or chewed (faugh!), adds nothing to the physical strength of man, much less to his mental or moral elevation.

Having thus in an introduction of the subject, which I would rather have made shorter, pointed out a few elementary facts, I proceed to answer the question—Is the labor of the dentist reproductive or non-reproductive? Also, I shall endeavor to point out the influence on the production of wealth of one or two of the mechanical devices used in dentistry.

To start with, I assert that the labor of the dentist is of a reproductive nature, and that of the best character. Politico-economically, the dentist has a *raison d'être*. Whatever labor tends in its result to preserve or restore health—to prevent the strength of man from being wasted by death or disease—is spent reproductively, and there comes to my aid at this juncture a sentence in the first number of the *Ohio State Journal of Dental Science*, written by “A Physician,” as under: “Defective teeth do much to shorten life, and Sir Thomas Watson offers as a prominent item in the causes of increasing longevity, the better condition of the teeth brought about by the revival and development of dental surgery.” Thus the dentist’s work tends in the direction of lengthening life—not merely of adding a period to the end of a man’s life, but of extending his prime, and preserving his health. Whatever destroys or impairs health, diminishes wealth, for those who are in ill-health cannot exercise to the full their function as wealth-producers. Whatever removes ill-health or prevents it, aids in the work of producing wealth. Dentists do this; therefore the labor of dentists is reproductive.—(*Q. E. D.*)

But let us examine somewhat more closely the work of the dentist in this relation. It is clear that as he is, speaking broadly, engaged in the work of conserving health, he has, in the eyes of the political

economist, a right to live. It is interesting to go into the details of his work and see in what respect they influence the great task of wealth producing, which is continually going on around us. The extracting of a tooth has the same politico-economical effect that the filling of one would have—that is, supposing the tooth to be extracted is unfit for filling. If the tooth is past all recovery and must be extracted, its extraction saves the sufferer pain, which pain would disable him from work—or, in other words, would disable him from increasing the wealth of the world by his labor. We have all heard of the Irish judge who, some years ago, blew out his brains because of the excruciating agony caused by a tooth. Had a dentist been on hand with forceps, all the learning of the judge, on which so much of the wealth of the world had been expended, would have been saved, at least for a time, instead of being irremediably lost. But suppose a good tooth is extracted—how does that operate politico-economically? Certainly the labor expended in its extraction is by no means reproductive. It is even worse than non-reproductive; for, the good tooth being absent, mastication is less perfect than it should be. Indigestion, from a less perfect mastication, is likely to ensue, and, during a lifetime, the unfortunate victim of such a dentist has to spend extra time in the work of masticating his food, which time might be spent in other labor of a wealth-producing character. On the other hand, the labor of filling a tooth is of a reproductive character, in so far as it enables one to more perfectly masticate his food. It is easy to see that the more perfect the filling the better the political economist would like it. If a tooth, which might be filled in such a way as to last for thirty years, is operated on so badly that it only lasts one year, and then is filled badly again, so that during its life as a partly-decayed organ it is filled, say, ten times, then the labor expended on nine of the operations has been spent unproductively—or, to be more accurate, the labor spent in those ten operations, minus that which would have been expended in inserting a perfect filling, leaves the amount of labor that was wasted or spent non-reproductively. But in such a case as I have supposed—namely, when a tooth filled properly at first would last for thirty years—it would not stand a series of operations and then last thirty years, but would in a much shorter time succumb to blundering work. It would then come under the same category of wasted wealth with the good tooth extracted by a butcher, such as I have referred to above.

Inserting artificial teeth is labor of a reproductive kind, because it tends to contribute to the health of the patient consequent on a better power to properly masticate food. Every contrivance introduced which enables the dentist to fit such teeth more accurately, or which economizes his labor, is valuable, and it is regarded as such, not merely by the dentist, because it saves his time and enables him to do his work more efficiently and expeditiously, but also by the political economist, who sees in every contrivance for the saving of labor a means for increasing wealth.

What part do such contrivances as the dental engine and the dental chair play in their general relation to the production of wealth? The dental engine is a reproductive agent in so far as it enables the operator to make the result of his labor more lasting, and enables him to save time that can be devoted to other reproductive labor. A dental engine's chief value lies in the fact, that by its mechanism the operator can employ the force imparted by his foot, in the performance of work which would otherwise have to be performed by his hand. This possibility of so utilizing the force of the stronger limb in the place of that of the weaker and more delicate hand is a great gain. The dental engine saves hours of valuable time of the operator, and thus enables him to do much more work than he would be able to do without. If we had no dental engines, either less dental work would be done for the public (which politico-economically would be a loss to the wealth of the world), or a greater number of dentists would be engaged in it, and they would be consuming more wealth to keep the teeth of the people in order than is necessary now we have the dental engine. The dental chair is valuable, politico-economically, in so far as it enables the dentist to get at his work better and more conveniently, thus saving his own time and health, and aiding him in performing better work.

Thus far I think I have shown that the dentist has a standing, and a sound one, politico-economically. I hope this assurance will relieve him. It is not very agreeable for a man to feel that he is a waster of the world's wealth. Because I felt that the readers of the MISCELLANY are able to follow such a line of argument as I have given them, I have done something more than merely assure them that they are very good fellows and have a right to live—I have shown them wherein their right consists. But let me warn them. They must not extract good teeth; they must not fill teeth badly in trying to get over their work quickly; they must not do anything to



hinder people in their strivings after health. After all, life is not much worth living if there is nothing for us to do but to amass money—or if that is the highest aim we have. There is a great struggling of humanity for something better than it now possesses—for elevation. Now, if we are going to do our share, we must rise above our own selfish purposes. A man imbued with a desire to further human progress could not, I think, long content himself with doing work of a non-reproductive character. He would want to do at least a man's share in the great work of subduing Nature to man's powerful will. The dentist who may have felt that he was living on the wealth of the world, without any clear idea as to whether or not he rendered humanity an equivalent in productive labor, may pluck up courage, go ahead with his work, do nothing badly, but rest assured that even the political economist will never ask him the ill-omened question—“What doest thou here, Elijah?”

## DENTAL JOURNALS AND WRITERS.

BY W. H. ROBINSON, A.M., D.D.S.

The first thought that occurs to us, in writing on this topic, is, that we may say what we choose about writers; but what if we should say some things that did not please the editor? “Respectfully declined,” or “Not up to the standard we require for publication in our journal,” might consign our paper and its views to oblivion. Then the profession would never know that one of their number had been brave or brazen enough to express his views of journals and editors, and then ask the said editors to publish those views in their journals. It is certain that every writer considers his essay good enough for publication in the journal to which he sends it. It is also certain that editors think many of these essays not worthy of publication. And beyond question the editor is often right. But it is equally certain that the editors sometimes reject manuscripts because their matter is new and strange, or not in the accepted style. It clashes with the editor's views, and reflects on the opinions of some of his most august contributors. Ideas and words may be good, advanced, suggestive, and yet sadly deficient in thought and style, if measured by the good old standards, who wrote according to the strictest rules of professional ritualism.

Personally we do not like journals, writers or essays that labor

under a big load of conventional dignity ; on the contrary, we are fond of persons and productions that break new paths and zig-zag a little to see if there may not be science and pasture outside of orthodox fields. Take all our current journalistic literature, and the average is good. Its practical and scientific features are better than its literary style. The purely literary features of an article may seem of little importance to the busy professional man, yet, if he should notice carefully, he will find a special relish in absorbing ideas from writers like Dr. O. W. Holmes, while he will find no such relish in digesting what may, perhaps, be equally good ideas served in that dull, prosaic style that never cuts to the quick. We are not advocating slang, yet "Old Mother Hubbard went to the cupboard" sounds more classical to us than "The relict of the late Mr. Hubbard retired to the household receptacle of pabulum."

Were we tabulating the virtues of writers, we would mark—Independence? Ah, no! A little blunt independence often lowers the value of an essay from the publisher's and editor's point of view. The writer may have been so regardless of their interests that he **did not recommend or indorse some patent apparatus or "fixin'"** found in the "ad's" of the journal, very highly recommended by men eminent in the profession. Or the writer may have used still less discretion, and actually condemned the very things that the publisher manufactures. Readers very often are greatly benefited by communications of this kind. But manufacturing publishers and, on their behalf, the editors, being judges, this style of writing is undignified, and such essays are apt to be by them considered lacking in scientific and literary merit.

Editors properly claim that they must be the judges of what is fit or unfit for their pages. We must concede this, but must also take exception to the rules by which they sometimes measure. Editors and journals usually profess to and do allow considerable latitude to writers in the expressions of their views, but editors are apt to have charitable predilections toward the communications that are in harmony with their whims. Of course, writers must bow and submit to the decision of the editor. He has no choice. "Respectfully declined" is a fiat from which there is no appeal, and yet the writer often muses over a returned manuscript thus: "The editor was pleased with my other communications, and yet I bestowed more study and investigation on this one than on any of my others. It was on a new theme, and I know it was one of my best efforts in

my best style. Well, that fellow may run his journal in his own way—that is the last communication he will ever get from me." The very points in the essay that the writer considered the best may be the ground for its rejection. As the impartial observer looks at instances like the above, he may well think it strange that when a writer's average productions are up to the editorial standard, that his special effort should fall below, and he justly decides that its light weight was due to defective editorial scales. And the result is, our literature is minus many a more or less brilliant essay, and the profession has another added to its legion of silent writers. Writers should not be too positive that their effusions are, *per se*, worth publishing. It is quite possible that the editor was right and that your brilliant production owes its "originality" to rather extensive omissions of quotation marks. If your essay is really good, some editor will find it out when he reads it, and be glad to give it to the profession. Journals may be independent of any one writer, but they are very dependent on writers in general. A journal that is only the exponent and product of its editor and publisher would do best as an annual of only a few pages. The gnomon that indicates the real worth of a journal is its aptitude to be in sympathy with the living, thinking, scientific practicalists, and to be the vehicle that gives their thoughts and productions to its readers fresh and pure. Readers often like writers' extravagances better than editorial preciseness.

The advertising pages of our journals are by no means the least important part. They are our advanced encyclopedia of illustrated dental apparatuses; they are full of practical suggestions and big statements that the authors sometimes know are not true.

Views of editors and writers vary much as to the range and class of topics admissible to the pages of a dental journal. As an illustration, take our present topic and what we say about it, and some editors would think it outside the range of topics admissible in their pages. Should this be the editorial verdict in the present instance, we have labored in vain to enlighten the centres of light. Perhaps as good a rule as they or we could follow would be to observe the deliberations of some of our higher dental societies, and regard the journal as the channel through which every topic and subject discussed by them should be conveyed to the profession. An article telling how to keep hands and instruments clean may be of more practical utility than one telling "there are globular bodies in

connection with the cementum by means of a pedicle. They are surrounded by a layer of spindle-shaped medullary elements, and hold in their centres a radiating protoplasmic mass resembling a bone corpuscle." Or that "spirit is substance whose differentiated fractionalization or *débris* is matter."

We think journals should give place to any production that any intelligent writer in the profession sends them. After a hard day's work on fidgety patients, the hearty ha! ha! a peep through "the dental spy-glass" may do us more good professionally and physically than the close thought necessary to dive into the wonders of "enamel prisms."

The small number of writers astonishes us a little at first thought; but, as we think the matter over, the surprise vanishes. Writing for journals, as a rule, is hard work, brings no pay, little thanks, and some expense for paper and postage. A look at your first-born effort in print may be ample compensation for your labor, but you will regard this as very poor pay for your tenth, and be very sure it is no pay at all for your twentieth. Authors who write for glory soon find it poor pay. The earnest man, as he feasts on the good things others write, often feels a debt of gratitude and makes an effort to pay it in kind. To some it is a pleasure to write; but no greater pleasure than to put a nice molar restoration in a pretty mouth, and receive in return a sweet smile, a grateful "Thank you," and a doubloon. There is only about one dentist in a hundred that writes for the journals. This is not very complimentary to a learned profession with twelve thousand members, thirteen colleges and four thousand alumni. Let me give a hint to our non-writers: Nothing tends so much to intellectual development and professional culture as essay-writing. He who writes must, as a rule, write intelligently, and to do this he must not only read, but digest what he reads, and analyze and investigate.

Readers, as you sit in your cozy chair and enjoy your journal, do you ever think of the debt of gratitude you owe the writers in the profession? The few pages you have just read may have cost the writer a day, week, or even month of hard work. As you enjoy this feast do you occasionally give the writers a grunt of gratitude for keeping you and the rest of the profession from becoming antiquated fogies, by supplying you so freely with living, fresh ideas? Young writers should not be discouraged if their first elaborations tumble from the lofty pinnacles they occupy in their producer's imagination



Such efforts are not in vain. They improve your orthography and syntax, if they do bore editors and readers.

Should writers be remunerated? This is a question that will sometimes force itself on the tired brain. Often an effort that represents a day's or week's work has been sent to some journal. The return of such a production "rejected" may answer the question financially, if not satisfactorily. We believe, as a rule, writers should not be paid. A little sacrifice and martyrdom gives an effort spontaneity and independence. A writer that gives a week's labor to an essay, and then gives that to a journal, or travels a thousand miles and then gives it and a hundred dollars expenses freely to an Association and the profession, makes a sacrifice. But so do his colleagues make a similar offering to him. The satisfaction of doing a generous deed, and the grateful "Thank you," is often better pay than a few dollars. Were the journals to pay their contributors, they would soon become narrow channels, and their fountain-heads dry and few. Now they are omnibuses for all heads—dry, verdant and perennial.

The importance of journals to the profession cannot be estimated. They are the great educators of the mass, primary schools for students, and advanced colleges for practitioners. All learn from them; many learn by supplying them with their literature; more should learn in this way. The number of direct original contributors to the *Cosmos* last year was twenty. To the MISCELLANY there was about the same number. Suppose the contributors to the other journals also numbered twenty. What we receive through our Associations materially increase the number of contributors to our literature; but, in the main, those who write for associations and directly for the journals are the same. So the burden of supplying the profession with mental pabulum falls on very few. Every year adds a few new writers to this list; but, unfortunately, many of the pens of our older contributors—men of clear heads and matured experience—are silent, while their heads are fuller of useful thoughts than in the days they were wont to write. Why are so many of these silent? Some of them could not raise their style and ideas to that lofty standard some editor required for his pages; or, perhaps, some busy practitioner has devoted an amount of time to the preparation of an article for a journal that, if devoted to business, would have put in his pocket from twenty to one hundred dollars. He may also have spent hours, days or even weeks to special investigation of his

topic, or to experiments that increased his knowledge or confirmed his opinions. His cash outlay in various ways may have been from fifty cents to several dollars. He sends this production to a journal and gets——? Perhaps a grateful "Thank you" from the editor; perhaps not even this much. Or, if he ordered an extra number of the journal, he gets with it a bill for twenty-five cents; and then he gets disgusted and joins the legion of silent writers.

But these writers should remember that, while their productions may benefit the journal and give it financial success, yet journals are only channels through which their efforts reach the profession, and the primary object cannot be obtained without the journal. Our journals are duly believed and appreciated by the great mass of the profession; yet a few, who give themselves the name of dentists, shut themselves up in ignorant isolation and take no journals.

Were we a committee to systematize a journalistic plan, we would say—a large reprint for the world, two or three national journals, and then as many local ones as could be maintained.

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## SURGICAL ANÆSTHESIA, INDICATIONS AND COUNTER-INDICATIONS.

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*Translated from the French of Dr. J. B. Rottenstein, in his "Treatise on Anæsthesia," by A. NAPOLÉON ROUSSEL, D.D.S., Brooklyn, N. Y.*

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WE shall divide this subject into two parts. In the first we shall consider the operations in which it is necessary to employ anæsthetics, and the nature of the anæsthetic best suited to the operation, and in the second we shall study the physiological conditions which may become counter-indications to the use of an anæsthetic.

When is anæsthesia indicated? The advantages of anæsthetics in surgery are to-day so little disputed that it appears to us useless to refer to this question. It would be equally idle to enumerate the list of surgical operations where the use of anæsthetic agents is indicated. We will state only this general principle: No painful operation should be performed without an anæsthetic. This rule is subject to but few exceptions, to which we will refer a little further on.

Certain careful surgeons—one might well say timid—frightened by the accidents imputed to the use of chloroform, never resort to an anæsthetic but for large operations, and think it useless to use it for

operations of short duration, such as the ablation of small tumors, the dilatation of the sphincter in anal fissure, the extraction of teeth, the opening of an abscess or a whitlow, etc. That we consider an unjustifiable proceeding, and the more so, as we possess the nitrous oxide gas, which produces a profound anesthesia in a few seconds, and lasts but a short time. They tell us that chloroform has produced death in cases where it has been employed for trifling operations (such as in-grown nail, extraction of teeth, etc.). That is possible, because chloroform is a dangerous agent that may cause death, whether it be used for small or large operations; but we think that no doctor has the right to inflict such terrible pain upon his patients as attends dilatation of the sphincter ani, or the opening of a whitlow, when he has an agent at his command as sure and as rapid of action as nitrous oxide gas.

Do not the pain and the nervous shock which generally accompany it constitute in themselves dangerous symptoms? "*Ubi dolor, ibi fluxus*," says the Hippocratic precept. Every time that pain is excited in a certain region a considerable amount of blood is attracted there, which may give rise to complications more or less serious. As regards the nervous shock that accompanies painful operations, so susceptible are some persons to it that it may become the starting-point for very grave accidents. There is a very authentic case on record of death following a dental extraction.

A great many persons, fearing the pain, refuse to submit to dental operations, and thus remain liable to the inconveniences and accidents which result from a bad dentition, carious teeth etc. We have no need to remind practitioners of the troubles and grave accidents that take their origin in the dental system (indigestion, abscess of the maxillary sinus, neuralgia, etc.). We can say that nitrous oxide gas, which facilitates in such a great degree the extraction of teeth, renders the greatest service in general pathology. We do not, however, hold that it is necessary to employ anesthetics for insignificant or slightly painful operations. We certainly do not advise it for so simple a case as the use of a scarificator and a cupping-glass, or for cauterizing a wound with nitrate of silver. In all cases extremes must be avoided, and the middle ground sought for.

Whatever it may be though, our opinion is contrary to that expressed by Drs. Lallemand and Perrin, that the use of anesthetics is indicated in all painful operations, whether they be of short duration or otherwise.

Outside of the pathological conditions we are about to consider there exists but one formal and absolute counter-indication, and that is the refusal of the patient to submit to the anæsthetic—a refusal which might be overcome by persuasion, but never by any other means.

*What are the morbid conditions that counter-indicate the use of anæsthetics?*

Writers on this subject have spoken of the influence that age may have, in certain circumstances, contrary to the ordinary use of anæsthetics.

*Infancy.*—In regard to infancy, it is indisputable that infants are more impressible than adults, and yield much more easily to the influence of the anæsthetic agent. But we observe nothing in that but a most natural physiological law, and in no wise a counter-indication. This remark, however, is applicable only to infancy, as, after a certain age, children are always more or less afraid of the operation, and struggle more or less in the surgeon's hands. The result of experience shows that the resistance and the excitable stage are always less than in the adult. Anæsthetic agents, then, can be administered with entire safety to extremely young children—we can even say with greater safety than to the adult; not only because accidents rarely occur, but because syncope, an accident which sometimes follows the use of chloroform, is very rare even in earliest childhood.

Some surgeons have even advanced the opinion that the danger which accompanies the use of chloroform in the adult is not to be feared in the child. What is this assertion based on? We are entirely unaware of it; but we can firmly say it is without foundation. Is it because no accident has ever been observed after the use of chloroform at the *Hospital des Enfants Malades* that the conclusion is that this agent can be given with impunity to children? We do not think so, and we will await a much longer experience before admitting an immunity so little in accordance with physiological and pathological laws.

To those that would be tempted to assert the absolute safety of chloroform when administered to children, we would refer to the published observations of Crockett (*American Journal of Medical Sciences* for July, 1857), and in which is recorded the case of a child five years old that died from the administration of a mixture of chloroform and ether. Our personal experience, as well as facts



observed in the hospitals of Lyons and in the greater number of the large cities of Europe and America, would lead us rather to be of the same opinion as Dr. Bouisson, who advises ether for children, as it is less active. In regard to nitrous oxide gas, its safety is as complete when administered to children as to adults. Dr. Colton has frequently given it to children just past two years of age for dental extractions and other short operations, and he observed no symptoms that would be likely to change the indication of this excellent anæsthetic.

*Old Age.*—Old age is no more of a counter-indication to the use of anesthetics than youth is. Every day we see aged persons submitting to the influence of ether or nitrous oxide gas without experiencing the slightest ill effects. Moreover, of all the death cases we have been able to collect, that of no aged person appears. The surgeon, then, should never be stopped by this consideration.

*Influence of Sex—Pregnancy, Menstruation, etc.*—It is entirely unnecessary for us to say that the influence of the sex is absolutely nothing. Some authors have declared their opinion that the administration of an anæsthetic during pregnancy or menstruation might occasion ill effects; but their assertion is not based on a single fact. It is a simple supposition which nothing justifies. We have administered nitrous oxide gas during menstruation and pregnancy, and have not had any catamenial accident. Dr. Perrin thinks that chloroform or ether administered during pregnancy might, by the extravagant movements caused by the excitable stage, be productive of accidents in women predisposed to abortion. But that we believe to be an unfounded fear, and which entirely disappears, as it is possible to entirely avoid the excitable stage by the use of nitrous oxide gas. That is, however, a secondary question, as it is not the anæsthetic but the operation itself that is counter-indicated during pregnancy and menstruation. A great deal has been said lately relative to the influence of the operation on the pregnancy, but this question, of course, cannot be discussed in this article. Formerly, certain American practitioners wished to deny the benefits of an anæsthetic to women because certain women had experienced lascivious dreams and had orally uttered their fears. It is sufficient for us to cite this opinion to show its entire emptiness. Lascivious dreams are rare during anæsthesia, and more so in women than in men.

*Condition of the Stomach.*—A full stomach is considered by some surgeons as an express counter-indication against the use of anæ-

thetics. We think there is some exaggeration and unfounded fears there. It is evident that it is preferable to anæsthetize a patient who has fasted; but we are convinced that no serious accident would happen from acting otherwise. If it is true that ether and chloroform used singly cause a patient with a full stomach to vomit; by using the nitrous oxide gas this inconvenience disappears.

*Pathological Conditions.*—All the authors that have written on the subject of anæsthesia agree that the influence of certain morbid conditions constitute an absolute counter-indication; but we think, nevertheless, that a certain number of diseases that have appeared in the list of counter-indications up to the present day should be dropped. We shall enumerate the diseases which, according to our opinion, have a real importance in the question before us.

*Diseases of the Circulatory and Pulmonary System.*—All organic diseases of the heart or lungs constitute a counter-indication to the use of anæsthetics. We do not state that as an absolute law, but we state our opinion formally, that individuals affected with serious lesions of the heart and lungs are particularly liable to serious accidents. It would be easy for us to cite numerous conclusive facts to support this assertion.

*Diseases of the Nervous System.*—Organic lesions of the brain and medullary substance evidently constitute counter-indications to the use of an anæsthetic. Alcoholism, also, appears to be an unfavorable condition, and writers on the subject report several cases of patients affected with delirium tremens having died during the administration of chloroform. Different nervous forms (epilepsy, hysteria, etc.), though they appear but little favorable, do not, nevertheless, constitute counter-indications to the use of anæsthetics.

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HE who pursues his own advantage only, so far as he can do so without injuring another, is just. He who gives up his superfluity rather than do harm to another is noble. He who works only for the common welfare is the most noble, and no one but him deserves the name.

**REPTILES' TEETH.**—In many reptiles, teeth are developed for the merely temporary end of effecting an exit from the egg-shell. This purpose is sufficiently answered by the hard snout of the crocodile, and by a sort of snout developed in *Chelonia* (tortoises and turtles), but snakes and lizards have sharp teeth developed on the premaxillary bones, which are afterward lost.—*Tomes.*

## FIRST DISTRICT DENTAL SOCIETY, NEW YORK.

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Held at the Office of Dr. O. A. JARVIS, 111 West Forty-Seventh Street, New York, February 1st.

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THE usual monthly meeting of the above society was held on the 1st of February, Dr. J. W. CLOWES in the chair.

## THE CLINIC.

Dr. W. D. TENISON (in the absence of Dr. BÖBECKER) reported on the clinic. He said that there were one hundred and twenty gentlemen present, and the proceedings were of a very satisfactory nature. There were representatives from Brooklyn, Philadelphia, Lancaster (Pa.), Paterson (N. J.), Newark (N. J.), Salem (Mass.), Ansonia (Conn.), Bridgeport (Conn.), New Haven (Conn.), and other places. The operators were Dr. Bonwell, of Philadelphia, and Dr. Nisley, of Lancaster, Pa. •

Dr. BONWELL demonstrated his method of setting his artificial crowns. He takes a porcelain crown which is concave, and has the undercut well up toward the grinding surface. He gets the full strength of the entire tooth in that way when putting in the pin. In drilling down to get his attachment he cuts from the palatine to the buccal surface of the bicuspid, or, in cases of the laterals or centrals from the palatine to the labial surface, leaving as much bone substance as possible to gain strength. He puts a little amalgam into the root of the tooth, and, forcing the pin through it, packs the amalgam around it. He then puts the crown on after filling round the pin with amalgam, and gets a cone-shaped mass of amalgam there, which gives great strength. He has then, virtually, a pivot of the whole breadth or size of the root of the tooth. He then packs in through the opening the balance of the amalgam which he wants to finish up the surface.

He (Dr. BONWELL) set a bicuspid of the clinic for one of Mr. White's young men, which operation took him about three-quarters of an hour, and when completed it was an admirably set crown. The plan is very simple, and can be adopted by any one. It does away with the suffering that is occasioned by the methods of Drs. Richmond and Perry of setting artificial crowns. Dr. BONWELL states that he always strives to avoid cutting away the root till he gets to the margin of the gum, and leaves the root of it strong enough a little

below the gum for the purpose of getting what strength he can in the root.

In the molar teeth he puts a pivot down in each root. The teeth for Dr. Bonwell's method are made by S. S. White, of Philadelphia.

Dr. BONWELL, on being asked of what material the pins are made, said that it is a secret at present. It is a very tenacious substance and not at all ductile. The amalgam also the Doctor prepares himself, and it will set sufficiently in fifteen minutes to allow for the trimming off of the surface, and compels the patient to be careful for an hour or two afterward.

Dr. BONWELL also exhibited his plugger, which can be adapted to any hand-piece, and it seems to work admirably.

Dr. NISLEY, at the clinic, built down a cuspid that was worn away to a considerable extent. He (Dr. TENISON) understood that the object of building it down was to prevent the centrals from setting improperly on the lower centrals and laterals. When the patient shut his mouth his lower jaw projected beyond the upper centrals and laterals, and, by building down this cuspid, the jaws were brought into their proper position. It was the intention to eventually tip all the centrals and laterals with gold. It took one and a half hours, or thereabouts, to perform the operation, but it was very beautifully done, and was very complete.

Dr. W. H. ATKINSON presented a lady for examination with six upper front teeth which had been very badly decayed and broken. It was a case of complete restoration, the operation having been performed eight years ago with No. 120 gold. The work appeared to be as perfect as when first done, and there was not a trace of leakage.

Dr. LATIMER presented a boy with an irregularity, and it was rather amusing to hear the diversity of opinion in regard to it. Men who are considered very able, were diametrically opposed to each other as to what should be done. It was a case of a lateral which shut in behind the lower laterals, the cuspid partially riding on the top of it. On that side of the mouth where the irregularity presented itself all the molars and bicuspid shut inside of the under molars and bicuspid. Some advised throwing out the molars and bicuspid, and gaining room thereby to bring the laterals out into position. Others advised the extraction of the lateral; others, the extraction of the first bicuspid and the moving up of the cuspid, and the bringing out of the lateral in that way; and others, the extraction of the four six-year molars.



Dr. CAMPBELL presented his new model machine, which has been repeatedly reported on. He promised to give a special clinic on the making of models and preparing the mouth to receive celluloid through his machine.

#### THE LATE MALLET CONTEST.

Dr. G. W. WELD (in the absence of Dr. BÖDECKER) said that the weight of the fillings which had been inserted in glass tubes at the January clinic and the times occupied in the work were as follows :

Operator.	Weight of filling.	Mallet used.	Time occupied.
Dr. M. H. Webb,	$9\frac{63}{100}$ grains,	Electric,	67 minutes.
Dr. Ottolengui,	$9\frac{40}{100}$ grains,	Automatic,	105 minutes.
Dr. Parmely Brown,	$9\frac{27}{100}$ grains,	His own steel mallet,	50 minutes.
*Dr. Ryneear,	$9\frac{20}{100}$ grains,	Lead mallet,	37 minutes.
Dr. G. W. Weld,	$7\frac{80}{100}$ grains,	Hand pressure,	30 minutes.

#### SETTING ARTIFICIAL CROWNS.

Dr. BONWELL, on being called on by the President, then made a statement in regard to his method of setting artificial crowns. The subject had taken his attention, he said, since 1871, and what he now submitted to the profession was the result of a great deal of experimenting. Some had objected to his method, because, as they supposed, there would inevitably be a discoloration of the gums from the amalgam used. That was not a fact, and the time has gone by when we may cease to give credit to amalgam. Amalgam has passed through a severe ordeal, and has been found extremely valuable. In such work as he had described, the use of gold was impracticable. He then gave a description similar to that reported above as having been given by Dr. Tenison.

#### ARTISTIC DENTISTRY.

This subject was down for discussion, but it was decided to take it up at the next meeting.

#### CASE IN OFFICE PRACTICE.

Dr. B. A. R. OTTOLENGUI said that a gentleman came to him some time since with a large external swelling that had existed for six months along the lower jaw. He had been under the care of his physician, who advised him to have the second molar extracted. This molar had been filled. The patient went to his regular dentist,

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\* Dr. Ryneear used larger pieces of gold and heavier blows than the other operators.

who said that the teeth were not the cause of the trouble, and did nothing for him. The gentleman then went to Dr. Ottolengui, who thought that it was a case of neuralgia, and sent him again to his physician. The physician again sent him to Dr. Ottolengui for a thorough examination. He found that the patient had a very strong set of teeth which were regular throughout, with the exception of the lower wisdom tooth on the side of the swelling, which was slightly tender to the touch. He (Dr. Ottolengui) concluded that the nerve had been severed from the main branch by a blow, and decided to extract the tooth. In thirty-six hours from its removal the swelling disappeared. The tooth had three roots and five-sixteenths of an inch of nerve protruding from each foramen. He cut the tooth open and discovered that the pulp was colorless. The patient returned to his regular dentist to show him the result of the extraction, and he said that whoever extracted the tooth was a butcher—a remark that, under the circumstances, was at least rather unkind, as he was unable to relieve the patient by anything he could say or do.

A discussion, which was taken part in by Drs. ATKINSON and WELD, then took place as to how the tooth in question caused the swelling. The conclusion was come to that it had received some mechanical injury, and that the swelling was of a sympathetic character in consequence of the arrest of the circulation of the blood.

#### A NEW METHOD OF SUSPENDING FEELING.

Dr. BONWELL made a statement advocating quick breathing by patients when about to have teeth extracted, which he maintained has the effect of an anæsthetic in suspending feeling.

The meeting then adjourned.

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#### ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

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ANNUAL GENERAL MEETING, JANUARY 10TH, 1881; ALFRED WOODHOUSE, ESQ., PRESIDENT, IN THE CHAIR.

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THE usual preliminary business was disposed of, after which

Mr. WALLIS showed his adaptation to dental requirements of Mr. Lennox Browne's Lime-light Illuminator. He said that there were already in use several forms of reflectors and condensers intended to enable one to work by the light of ordinary gas; but these would be found unsatisfactory just when most wanted—viz., on foggy days—on account of the very inadequate supply of gas which was generally

furnished in the daytime. This apparatus had been arranged by Mr. LENNOX BROWNE for use with the laryngoscope, and he (Mr. Wallis), by making a few alterations, had adapted it to the requirements of dental practice. It could be adjusted to any height and to any angle, could be turned off and on in an instant, and was perfectly safe. He had used it for two months on foggy days and also at night, and had found it by far the best form of artificial illumination which he had yet seen. The amount of common gas burnt was very small, and the oxygen cost only 2½d. per hour, excluding the time and labor spent in making it. As to the cost of the Illuminator, it had amounted in all to £13 18s. 6d., including retorts, etc., for making the oxygen, and bags for storing it.

Mr. LENNOX BROWNE said Mr. Wallis had scarcely done himself justice in describing the modifications he had introduced in order to adapt the light to dental work: they were indeed very considerable. Still he (Mr. Browne) did not yet consider it perfect, and he was very pleased that it should have been thus formally introduced to the dental profession, since dental practitioners were generally men with a great talent for mechanical contrivance and invention, and he had no doubt that if they once took it in hand further improvements would soon be effected.

The PRESIDENT asked Mr. Wallis if he did not think that if the light was much used there would be danger of injury to the eyesight of the operator? In working with gold, especially, the reflection must be very dazzling.

Mr. BROWNE said the light could be easily modified by the use of some solution instead of plain water in the trough which was placed to intercept the heat. A ready means of doing this was to add a few drops of common ink to the water. But ordinarily he did not think that the operator would suffer any inconvenience.

Mr. COLEMAN said that although the light appeared so bright, it was not nearly so strong as direct sunlight—this could be shown by throwing the lime-light on to a screen exposed also to the sun, when it would be found that the latter would throw a shadow in spite of the oxy-hydrogen light.

Mr. F. WEISS said it might be well to know that nitrous oxide gas could be burnt in this light instead of oxygen with nearly the same effect; as nitrous oxide was always at hand, it might sometimes be convenient to use it for this purpose.

Mr. F. H. WEISS, JR., suggested that if the light was at any time

found to be too brilliant, it could easily be toned down by screens, as was done with the ordinary magic lantern.

Mr. WALLIS said he did not think it would be found too bright. He had used it on one occasion for two hours without intermission, and had not found it fatiguing to the eyes. One great advantage was its steadiness ; it did not flicker like gas. The direct glare was certainly disagreeable to the *patient*, but this was obviated by providing him with a pair of tinted spectacles.

Mr. DENNANT said that at the November meeting the President originated an interesting discussion on the subject of the alleged practice of gold-filling by the ancient Egyptians. An abstract of this, which appeared in the *British Medical Journal*, had called forth two letters, neither of which, however, supplied any additional evidence in favor of the antiquity of the practice. One writer, after quoting Sir Gardiner Wilkinson's statement, the accuracy of which had been called in question by several members of the society, adds : " I believe that additional confirmation of the fact may be found in Thomas Pettigrew's 'Egyptian Mummies,' or in Bunsen's 'Egypt's Place in Universal History.' " The other writer says : " I think I have seen gold-stopping there " (*i.e.*, at the Etruscan Museum at Corneto, the ancient Tarquinia), " or in the Etruscan Museum at the Vatican, or at Signor Augusto Castellani's here." This " I think " and " I believe " was the kind of evidence on which the belief in the knowledge of the art of gold-filling among ancient nations appeared to rest. Since that meeting he had himself been able to confirm by another example the probable accuracy of the President's explanation of the way in which the belief originated. In the Brighton Museum was the head of a mummy which had always been credited with possessing a tooth which had been stopped with gold. He had taken an early opportunity of examining this specimen, and found that there was, as the President had suggested, only a superficial coating of gold on the tooth, and that there was no filling of any kind. There were also traces of gold to be seen on the margins of the hard palate.

Mr. OAKLEY COLES suggested that the Secretary for Foreign Correspondence should write to Professor Erbs, of Berlin, who was undoubtedly the greatest Egyptologist of the day. His opinion would probably set the matter at rest.

The PRESIDENT announced that Mr. Browne Mason, of Exeter,



had sent for exhibition a curiously malformed left upper molar, which he had extracted from the mouth of a youth aged seventeen : that Mr. J. A. Gartley, of Sackville street, had sent for the museum a preserved specimen of the cobra di capello : and that Mr. W. S. Burrows, of Regent's Park, had presented a handsomely mounted stand of dental curiosities.

Mr. F. CANTON showed models of the mouth of a child aged four years ; it was healthy and had never had any illness yet ; there were but four teeth in the upper jaw and two in the lower. The next child in the family, two years younger, had its full complement of teeth.

#### PRESIDENT'S ADDRESS.

The PRESIDENT then delivered his valedictory address, in the course of which he said : " I think that we may consider that the session has been one of interest. On our first evening we had a paper by Mr. OAKLEY COLES, on deformities of the upper jaw, and an ingenious attempted classification of them into typical forms by a method of measuring their several proportions. He suggested a series of names so as to define each variety. He propounded ingenious theories as to the cause in foetal life for these malformations, and considered how far such conditions were hereditary and an indication of deterioration of race.

" Dr. LANDER BRUNTON gave us a very interesting and valuable paper on nervous affections connected with the teeth—a paper which will well repay our members carefully to peruse. In it he scientifically traced the track through which the irritation set up in the teeth passed, producing spasms in the accompanying vessels in its course and developing pain in comparatively remote regions—pain which is too often considered to arise from other causes, and treated constitutionally, when the seat of irritation should have been first sought for and the cause removed. He illustrated his paper by many cases, and in the discussion which followed others were brought before us by members, all showing how important it is in nervous pains, especially of the head and neck, carefully to examine the teeth before deciding the character of the neuralgia.

" To Mr. ARTHUR J. UNDERWOOD we are indebted for bringing before the society for the first time the operation of nerve-stretching. He described cases of terrible neuralgia which had existed for years, and which no remedy then known could relieve. In one, after years of suffering, the patient was permanently cured by two opera-

tions of nerve-stretching. Many other cases were given in which an equally good result followed this operation, and in none had any ill effects followed the stretching of the nerve, though in two death had followed the operation, one from hemorrhage and the other from erysipelas. We must all rejoice that we have in this a cure for cases of suffering which before resisted all known remedies.

“MR. EDWIN CANTON gave us a most interesting series of cases of great constitutional disturbance caused by the absence of sufficient masticating power, which were cured by artificial teeth being supplied to the patients. He also reported some cases of epilepsy and paralysis, which he considered due to dental irritation.

“On the same evening we had a paper by Mr. MUMMEY on a remarkable series of cases of diseased conditions produced by irritation of the dental pulp, strabismus, accompanied by blanching of the hair on one temple, caused by defective teeth. When they were removed, the squint was cured, but the hair continued white. Another case, where deafness was cured by the removal of a tooth. Also several other curious instances of the relief of severe and remote pains by skillful dental treatment.

“We have to lament the loss of Mr. W. A. Roberts, of Edinburgh, a former Vice-President of our society, and one who was always active in advancing the interests of our profession. Mr. Marsh, of Manchester; Mr. J. D. Garratt, of the Isle of Man; Mr. Gillam Mosely, of Sheffield, and Mr. H. Baron Rodway, of Torquay, are also members of our society who have passed away. We have to lament the death of a very gifted honorary member of our society, William Sharpy, M.D., F.R.S., who for forty years held the chair of Physiology at University College. Indeed, he founded the practical teaching of the Science of Physiology, and his works on Anatomy and Physiology are in the highest repute throughout the world.

“We have also to deplore the loss of an honorary member who attained high eminence in the scientific world, who died last year at the ripe age of eighty-seven. The late Mr. Thomas Bell was educated as a surgeon, but from an early age practiced as a dentist, and continued to do so till 1860, when he retired and went to live at Selbourne, occupying the house rendered famous as the residence of the Rev. Gilbert White. A more suitable successor could scarcely be found to that naturalist.

“Our profession has lost one during the last year bearing a name well known and honored for two generations; whose death, though

he was not a member of our society, should not, I think, be passed over in silence. I refer to Mr. George Darby Whaite. His father was dentist to George IV., and he, after studying in Paris, passed the College of Surgeons in 1824, and then succeeded to his father's practice; this he conducted till 1843, when he was induced by a member of the Imperial family of Russia to go to St. Petersburg; there he remained for some years, but at last returned to London. At the institution of the College of Dentists he was elected their first President, which office he held for some time.

"In this age of progress it is pleasant to know that our own specialty has at last been aroused to advance, and each year sees it gaining both in the scientific and social world; but much land has yet to be conquered and occupied, and it behooves all of us to bestir ourselves to further advance the interests of our profession. We can do so collectively by our societies and associations, but we must remember that these are composed of individuals, and that as are the units so will be the whole body. Let us each, then, see that we act loyally to each other and to our patients, each speaking of his fellow-practitioner as if he was at his elbow, and each treating his patient as if he himself were the patient instead of the operator. If all thus act, the time will not be far distant when men will be proud to say that they are dentists, for all will speak well of them."

A vote of thanks was passed to the President for the zeal and ability he had shown during his year of office, and the meeting adjourned.

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#### OBITUARY.

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WE are pained to announce the death of Dr. Wm. Reynolds, of Columbia, S. C. Dr. Reynolds was one of the oldest and most respected practitioners in South Carolina. He was one of the first to make a rubber plate, and had a license from the Goodyear Rubber Company.

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CORRECTION.—In our report of the meeting of the Massachusetts Dental Society, on page 59 of the February MISCELLANY, for "Dr. H. A. Babner" on the 12th line, and on the last line but one, read "Dr. H. A. Baker."

LEARNING should be used to produce good actions, not empty disputes.

## CONNECTICUT VALLEY DENTAL SOCIETY.

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THIS Society held its seventeenth annual meeting, as usual, at the Haynes House, Springfield, Mass., October 21st and 22d, 1880. Drs. MARSHALL H. WEBB, of Lancaster, Pa., and J. B. DAVENPORT, of Williamstown, Mass., read highly interesting papers. Prof. CHARLES MAYR,\* of Springfield, Mass., read a paper that embodied the results of a long series of scientific experiments with filling materials of different kinds upon teeth of different ages and densities. The paper—one of the most valuable ever read before the Society—was listened to with close attention. At its close the author was warmly complimented by Dr. Atkinson and others, who discussed the paper at considerable length.

Dr. WEBB gave a clinic at the dental depot of Mr. Wm. M. Williams, and the uses of the electro-magnetic mallet and engine were finely shown.

Previous to adjournment the following officers were elected for the ensuing year: President, Dr. C. S. Hurlbut, Springfield, Mass.; First Vice-President, Dr. J. N. Davenport, Northampton, Mass.; Second Vice President, Dr. C. Fones, Bridgeport, Conn.; Secretary, Dr. A. M. Ross, Chicopee, Mass.; Assistant Secretary, Dr. S. E. Davenport, New York City; Treasurer, Dr. W. H. Jones, Northampton, Mass. Executive Committee—Drs. J. B. Davenport, Williamstown, Mass.; J. H. Beals, Amherst, Mass.; W. H. Loomis, Rockville, Conn. A. M. Ross, Secretary.

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## TO CORRESPONDENTS.

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[UNDER this head we shall be pleased to give our readers an opportunity of obtaining information which their own libraries or experience may not furnish.]

TO K.: The 1859 meeting of the American Dental Convention was held early in August at Niagara Falls. Dr. Isaiah Forbes occupied the chair.

TO H. F. C.: We quite agree with you as to the desirability of dentists being armed against makers of practically useless motors. Your suggestion we value. In an early number of the MISCELLANY we hope to be able to present some hints on motors from the pen of a contributor who has made a study of the subject.

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\* [We shall publish Prof. Mayr's paper in the next issue of the MISCELLANY.  
—ED. J. D. M.]



## THE DENTAL SOCIETY OF THE STATE OF NEW YORK.

THE attention of the dental profession is called to the following special offer of *forty dollars* in cash as a prize for the best practical paper upon "Improvements in Dental Practice since July 1st, 1868," subject to the following conditions :

1. Any dentist residing in the United States, and of good repute, may compete.

2. All essays must be submitted to the Committee on Prize Essays (W. A. Bronson, 8 East Thirty-fourth street, New York, Chairman,) on or before the first day of May next.

3. The name of the author must accompany each paper, in a sealed envelope.

4. The successful competitor must be present at the next annual meeting and read his production, which shall then become the sole property of the society.

5. The committee have full authority to discard all papers if none are presented worthy of the prize, or within the scope of the subject proposed.

The next annual meeting of the society will be held in the city of Albany on Wednesday, May 11th, 1881.

S. A. FREEMAN, *Secretary.*

## WRITING FOR DENTAL JOURNALS.

IN another part of the MISCELLANY we publish an article by Dr. W. H. Robinson, on "Dental Journals and Writers," which contains several valuable suggestions. We are not about to criticise the article, but would refer to Dr. Robinson's remarks concerning the remuneration of writers, and would also contribute something ourselves *apropos*. We know a gentleman who, some years ago, engaged in a very respectable business that had no connection whatever with dentistry or the healing art. He advertised considerably by means of hand-bills and in newspapers, and was successful. But he thought he would become a dentist, and forthwith started in that honorable profession. He did nothing whatever to break through the acknowledged ethical rules of dentistry, and did not spend a cent on advertising. But, being naturally ready with his pen, he began to ply it, and, by bringing his name before the readers of the dental journals in their literary pages, he secured some little recog-

nition by his contemporaries. We have no hesitation in saying that the professional and pecuniary advantage that accrued to him in consequence of his writings was far greater than he could possibly have obtained if his writings had been paid for liberally and published in such a way that the public never came to know who was the writer. He was remunerated in an indirect way, for he has in a great measure, through the influence of his writings, built up for himself a very lucrative practice.

Let us give another instance in which dental journals have been a very powerful factor in raising a man to a premier position. He started life with no particular prospects, and, unlike the dentist we have referred to above, had but little, if any, skill in the use of his pen; but he had a tongue, and he could use it to some purpose. He became a dentist and a member of various dental societies. When he attended their meetings he generally had something to say that was worth listening to. His remarks were duly reported in dental journals, and his name began to be well-known among other members of the profession. His fame (through the journals, and friends whom he met at dental gatherings) reached to Europe, and dentists in England, Germany and France referred their patrons to him when visiting this country. By means partly of good work and partly of this form of advertisement he also built up a lucrative practice.

After this, let not our readers assume that it is a pecuniary loss for them to write for dental journals, or to belong to dental associations. But we would caution our friends against following the other extreme. It is of no use for them to write for the journals or speak at meetings of dentists if they have nothing to say. If they do, there is danger of the editor "respectfully declining," as Dr. Robinson says. The remarks of the man, whether verbal or written, who would get dental journals to be one of the helps to his advancement, must be the result of thought, or they will certainly defeat his purpose. But while saying this we cannot be oblivious to the fact that there are a great many men whose names are not prominent among their professional brethren who are always silent, thinking that they have nothing to say. They never write a short article on a difficult case in office practice for the MISCELLANY, because they think they were not made to write for magazines. They are never tired of drinking in the remarks of others, but they never attempt to give an equivalent. This is rather selfish. They should speak at the dental meeting and write for their dental journal, leaving it to

the discretion of the editor to alter or amend, or even reject, whatever is said or written. They will generally find that the editor is not so black as he is sometimes painted. Even when he has to reject an article, he does it kindly and in such a way that it is the fault of the writer himself if he does not profit in the end from the trouble he has been at. After all, the position of the writer for a journal is not so bad as is that of some publishers. If even the writer gets no pay, he does not lose anything; and it is very easy for a publisher to lose from one to five thousand dollars a year by his publication. Looking at it from the paltry standpoint of dollars and cents, the man who writes may, after all, derive pecuniary benefit from his writings, if even it is not from the publisher of the journal.

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### OUR ENGLISH LETTER.

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(FROM OUR CORRESPONDENT.)

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LONDON, *February 12.*

MEMBERS of dental circles in England are just now very much exercised in their minds over the late meeting of the General Council of Medical Education and Registration. This august body met together on the 3d inst., with the usual amount of red-tape ceremony, and its day's work ended in an unsatisfactory fizzle. The Dentists Act of 1878 has caused the members of the profession in the United Kingdom an enormous amount of trouble, and, valuable as it promises to be, there seems to be, somehow, a very great difficulty in getting it to work. Its action—or shall I say its disposition to be inactive?—reminds one very much of a big cannon which promises such great things, but which is so unwieldy as to require a tremendous deal of strength and time to get it to bear on the enemy. In this case the enemy consists of the hoards of unqualified, ignorant, self-styled dentists, who know no more of anatomy than a blacksmith. They are what in America you would call "gutter dentists," and very bad at that even. Those of us who have aspirations on behalf of the profession want to clean out a large number of these men. Against them individually we have nothing to say any more than we should against the cobbler we might chance to meet in the street; but we want them to stick to their last and not persuade the public that they are competent to remedy oral troubles.

The number of men who registered up to August, 1879, as dentists in the United Kingdom, was 5,289—double the number contemplated by the gentlemen who were the founders of the Act of Parliament of 1878. About five hundred names were challenged by the British Dental Association. It was chiefly to consider this challenge that the Medical Council met. And what an antagonistic clashing there was of common sense and law! There were not wanting evidences that some of the leading legal luminaries of the land had been knocking their heads together to interpret the meaning of this and that phrase of the Act, and even then the Council afforded proof of the truth of the old saying, that the least common of all kinds of sense extant is common sense. The Act has a great deal to say about the rights of a *bona fide* dentist, which rights must not be infringed on. He must be carefully guarded—a hedge is placed around him, and he is as carefully petted as Satan (with a characteristic disregard of truth) contended Job was. But these wiseacres in the Council had to be told by the lawyers what a *bona fide* dentist is. To them he is a myth. We may each of us form an opinion as to the particular kind of look and standing this myth has: but individual opinions are not enough. What did the framers of the Act and the House of Commons understand him to be? To get at this the Council must ask the Attorney-General and other great lawyers. These men, whose heads are too full of the contents of law tomes to be able to hold anything else, have come to the opinion that a *bona fide* dentist is a man who pulls teeth. So long as a man can prove that he has pulled teeth, and that he is sometimes engaged in that work, he is accepted as a *bona fide* dentist. So say the lawyers, and the Medical Council have accepted the *dictum* and acted on it. Thus the Register is to remain unpurged. Thus, despite the law, there will be kept on it the names of hundreds of persons who are essentially hairdressers, but perhaps in practice as chemists, without any license for that even.

I am willing to admit that it pains me to write for the readers of the MISCELLANY such humiliating facts concerning this country and its dental standing. No one—not even those who are the most ardent and impatient reformers—expected that so great a reform as is contemplated by this Act of Parliament would be carried into effect at once. It could not be prevented that several hundreds of the men who would register as dentists prior to the enforcement of the new law would be a long way below the desired standard. But



it was hoped that this number would be reduced to a *minimum*—that some sensible discrimination would be exercised in excluding men who made barefaced and fraudulent claims to be registered—that our high legal authorities would not go over bodily to the side of these interlopers. No one would insinuate that the Attorney-General and the other lawyers had been bribed, but certainly they could not have played more into the hands of barbers and tinkers if there had actually been money placed where it would do the most good—to adopt an American phrase.

But let it not be assumed that all the members of the Medical Council were in favor of disregarding the challenge of the Dental Association. Some of them raised their voices against it with vigor, and they have the thanks of the profession for it. It is gratifying to find that the dentist's work is not regarded by the people nor by the members of the medical faculty as of the inconsequential character that it was years ago. Sir William Gull, for example, said at the meeting of the Council, that he should be sorry if it went forth to the world that they, as medical men, had decided that dentistry was nothing but the work of extracting teeth. He regarded it as one of the chief functions of dentistry to preserve teeth. That is well; and I hope the Council agree with him. It would have been much better, though, if they had acted on the principle contained in his words. John Bull is sometimes far too tenacious of what he erroneously calls "rights of individuals." He would destroy a thousand Russians for molesting one Englishman, and he often carries out this principle a little too far. He will let hundreds of patients suffer for their lifetimes rather than stop the freaks of one barber who professes to be a dentist. If dentists' patients were all Russians, or Boers, or Afghans, we could understand it—then John Bull would be logical in letting them be injured by English pseudo-dentists. But he is very foolish to allow men, boys and apprentices, who have no claims to be regarded as dentists, to be backed up by the law in their work of molestation of the happiness and comfort of the patients who are misled by their pretensions. I am in favor of observing men's rights—vested and other rights—but no man has a right to do wrong. Obviously it is wrong to pull out a tooth, which, if properly filled, would last a lifetime. This is done every day by these underlings who have excited the pity of the lawyers, and whose falsely-called rights are so carefully observed. Am I not correct, then, in my asseveration that men who are in-

ompetent should be prevented by the strong hand of the law from practicing dentistry, even if they have for a few years past beguiled their time and troubled the world by exercising their strength in wielding the forceps?

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## PEEPS INTO THE MAGAZINES.

BY "ALERT."

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THE *Ohio State Journal of Dental Science* is lying before me, and its first number is so well got up that old journalists instinctively fall to estimating the amount of labor that the editor will have to expend once in two months to maintain its standard. It contains sixty pages of reading matter besides advertisements, is beautifully printed on excellent paper, and I am willing to confess that in a perusal of it (which I will admit has been somewhat hasty) I have not seen more than two typographical errors. That speaks well for Xenia and Toledo. The literary matter is of just the kind that I like to see in a dental magazine. It is not dry or tiring. While it is calculated to instruct, there is not that inordinate, encyclopedical heaviness which some editors seem to have a great preference for. In the first article the editor asks the question, Is anæsthesia physiological? and replies that it may or should be, using the word physiological in opposition to pathological, the idea being that pathology is morbid or diseased physiology. "A Physician" points out some of the defects in the present method of educating dentists. Dr. E. G. Beatty deals with "dentistry as a candidate for medical honors," and very sensibly protests against the "egotistic clamor" which some dentists are ever ready to engage in for those "honors." "Editor's Specials" occupy about twenty-two pages, and they bring us into close contact with the mind of the editor in a pleasing way. Reports of societies, correspondence, notes on books and pamphlets, questions and answers and compilations complete the number. I hope that the editor, whose experience enables him so well to conduct the *Journal*, will long be spared in health and vigor to present to us every alternate month such a first-rate number as this.

The place of honor in the *Cosmos* is given this month to an article by D. Van Denburgh on "Filling Teeth." The literary style of the author is pleasing, but some of his theories would not at all meet with universal approval. He speaks of the good qualities of so:

gold foil in the following terms: "Good, pure, clean, soft foil has abundant cohesiveness for any filling confined within cavity walls. It will make fillings that will neither crumble nor wear away." He then urges on dentists the desirability of so filling teeth with gold that the filling may be concealed from external view. He declaims against barbarous exhibitions of enamel cut away and gold glaring in its place. With such a declamation I heartily agree, but at the same time it may as well be admitted that there are some people who consider gold-stopped teeth somewhat as they do articles of jewelry, worn for personal adornment. Jewelry is all very well in its place, but its place is not to supplant Nature, and however dentists may recognize this fact, some of the least artistic of their patients are not sufficiently imbued with artistic tastes to follow them. They need to be educated.

In the *Dental Juris* Dr. W. H. Robinson makes some practical remarks on the subject of dental criticism. He brings before the reader some types of professional critics, and points out the care that is necessary to be exercised by one dentist in passing judgment on the work of another. If Dr. Robinson's little sketches are true to life—and we have no doubt but they are—there is not that amount of *esprit de corps* among members of the profession that there should be.

The *Dental News* gives two of its columns to a railing letter against diplomas from a "Student." Perhaps when this "Student" has lived a little longer in the world he will reverse his opinion that "public opinion will exterminate quackery sooner than all the colleges on *terra firma*." The day has gone by for "students" to depreciate the value of diplomas issued by reputable dental colleges, and consequently this one is behind his age. It is too late to maintain that public opinion can protect itself against quackery except by demanding that dentists shall be college graduates. I am willing to admit that the law as it at present exists may be unjust to some men who have the mechanical skill to make good dentists, but who have not the money needed to take them through college. But if there were no such law, the wrong done to the public by unskillful men would aggregate far more than the wrong that is now done to would-be dentists. "Student" will one day realize—if he is an intelligent man—that the establishment of colleges, the issuing of diplomas, the existence of laws preventing the practice of quacks, are all signs of progress—progress which, as a nation and as a pro-

fession within the nation, we are proud of. If "Student" lives and is patriotic, he will share our pride.

The opening article in the *Dental Luminary* is from the pen of Dr. W. R. Holmes. It occupies more than six columns, and deals with hygiene and its relations to the development of perfect teeth. It contains a great deal of good sense, and there is more real practical information on living under natural conditions, and its effect on the teeth, than in any article I have seen in the dental journals for some time. This is not necessarily a disparagement of the articles that other journals publish—the subject that Dr. Holmes takes up is, not one that always requires grinding at. But, at the same time, it is one that needs to be taken up sometimes, and the subject does not suffer with Dr. Holmes' treatment of it. He has learned that quack medicines and chemical "remedies" are far less efficacious in restoring a broken-down system to health or in maintaining the human frame in normal health, than an observance of Dame Nature's laws. Some of the learned M.D.'s of the present day have not yet learned this. They would do well to divest themselves for an hour of their halo of self-importance and self-esteem and sit at the feet of Dr. Holmes and learn somewhat on this particular subject.

The *British Journal of Dental Science* opens with a lecture by Thomas Gaddes on dental anatomy and physiology. This is the second of a course, and deals with horn and bone. "A Correspondent" living in America again airs his ideas, this time on American progress and flourishing dentistry, and argues that the physical necessities of the people have called into existence the American dentist, and he would have disgraced himself if he had not advanced to his present position. Then he gives a little information to his English readers on "dentists' differences," dealing chiefly with the differences caused by the rise of the "new departurists."

The subject of the mechanical production of anæsthesia is dealt with in the *Detroit Lancet* by Dr. Wyman. We have read some little lately regarding the possibility of producing anæsthesia by rapid breathing, and Dr. Bonwill, of Philadelphia, professes to have performed slight surgical operations on patients who have been rendered insensible to pain by rapid breathing. Dr. Wyman attributes insensibility to pain during tooth extraction, preceded by rapid inspirations, to interference with the circulation of the cranial



cavity. "We know," he says, "that rhythmical impulses in the cerebral circulation occur synchronously with the respiratory movements of the chest. Majendie supposed these impulses due to the presence of a valve at the junction of the sub-clavian and internal jugular veins."

## NEW YORK COLLEGE OF DENTISTRY.

THE Fifteenth Annual Commencement of the above college took place at Chickering Hall, New York, on the evening of the 23d of February. The degree of Doctor of Dental Surgery was conferred on twenty-nine candidates by Dr. W. H. Allen, the President of the Board of Trustees. The following is a list of the candidates :

M. Abello, U. S. of Colombia.	T. Moore, England.
C. H. Allen, Connecticut.	W. P. Moss, New Jersey.
G. A. Bradford, New Jersey.	G. D. Moyer, New York.
R. R. Dalglish, Ontario, Canada.	J. H. Reed, New York.
W. H. Dodin, New York.	R. Rico, Mexico.
C. H. De Lamater, jr., New York.	C. P. Robinson, Alabama.
G. H. Dickey, Brooklyn,	L. W. Sageman, New York.
C. W. Ferris, Connecticut.	E. Salicrup, Porto Rico.
L. Grasse, New York.	R. McL. Sanger, New Jersey.
M. Gonzalez, U. S. of Colombia.	F. E. Scofield, Connecticut.
A. Grosch, Germany.	H. H. Sisson, West Virginia.
C. W. Hoblitzell, Maryland.	S. R. Somerville, Chili, S. A.
H. Isea, Venezuela.	J. T. Tate, Oregon.
H. Jaramillo, U. S. of Colombia.	D. A. Williams, Maine.
O. Middelkamp, Germany.	

The valedictory was delivered by J. Torrence Tate, D.D.S., and the Rev. John Hall addressed the graduates.

There were seven prizes offered to the students during the session, which were awarded as follows :

First—A gold medal offered by the Faculty for the best examination in all the departments. Awarded to Louis Grasse, D.D.S., of New York City.

Second—A set of "Oral Surgery" instruments, offered by Prof. F. D. Weisse, M.D., for the best report of his surgical clinic. Awarded to J. Howard Reed, D.D.S., of New York City.

Third and Fourth—Two prizes awarded by the Trustees of S. S. White : (1) A dental engine for the best practical set of artificial teeth mounted upon gold or other metal base. Awarded to August

Grosch, D.D.S., of Germany. (2) A set of Varney pluggers for the best essay on the treatment of exposed pulps. Awarded to H. H. Sisson, D.D.S., of West Virginia.

Fifth and Sixth—Two prizes offered by Johnston Bros., of New York: (1) A Johnston dental engine for the best work in operative dentistry done by a graduate. Awarded to C. P. Robinson, D.D.S., of Mobile, Ala. (2) A set of Abbott's pluggers for the best work in operative dentistry done by an undergraduate. Awarded to A. J. Syme, of Connecticut.

Seventh—A set of instruments valued at \$25, offered by Dr. A. W. Edwards of France, for the best practical set of teeth mounted on celluloid. Awarded to H. Isea, of Venezuela.

The number of matriculates during the past year is one hundred and seven.

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#### PENNSYLVANIA COLLEGE OF DENTAL SURGERY.

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THE Twenty-fifth Annual Commencement of the above, was held at the American Academy of Music, Philadelphia, Pa., on the 26th of February. The following is a list of the graduates;

W. R. Allison, Ohio.  
G. H. Ashman, Pennsylvania.  
L. Bischoff, England.  
Joseph R. Bou, Cuba.  
Theodore F. Boyd, Pennsylvania.  
George V. I. Brown, Minnesota.  
Wm. Lewis Cave, Pennsylvania.  
F. De P. Chaguaceda, Cuba.  
Fred B. Clapp, Illinois.  
Lewis P. Cook, Pennsylvania.  
Emiliano Currea, South America.  
W. Dammann, Germany.  
Edelmiro Dalmau, Cuba.  
Art. W. Deane, Vermont.  
Otto R. Doeltz, Germany.  
Anna von Doemming, Germany.  
Nelson P. Duffy, Pennsylvania.  
J. M. Fulton, Pennsylvania.  
Fred M. Gantz, Pennsylvania.  
Eduardo Gaviria, South America.  
M. D. Galbraith, Pennsylvania.  
Richard F. Guenther, Germany.  
Geo. H. L. Haar, Pennsylvania.

John M. Hales, Wisconsin.  
J. G. Halsey, New Jersey.  
E. E. Harrington, New York.  
J. P. Haworth, Pennsylvania.  
Walter S. Hoke, Pennsylvania.  
R. H. Horner, Pennsylvania.  
F. E. Holden, Pennsylvania.  
M. G. Jenison, Minnesota.  
S. A. Johnston, Pennsylvania.  
C. F. Kaufman, Pennsylvania.  
Bryant Kerr, Illinois.  
Oscar Klein, Germany.  
A. O. Lester, Georgia.  
W. B. Libbey, Pennsylvania.  
James A. Lupton, Ohio.  
C. H. S. Littleton, Maryland.  
A. M. Lorenz, Germany.  
R. H. Mccredy, England.  
H. T. Nathorst, Sweden.  
Olga von Oertzen, Germany.  
Arthur H. Palmer, Pennsylvania.  
James G. Palmer, New Jersey.  
W. H. Painter, Pennsylvania.

Lizzie E. Pepper, Pennsylvania.

Jose Y. Rabell, Cuba.

E. H. Raffensperger, Pennsylvania.

Benjamin H. Reed, New Jersey.

Wm. Reeder, Pennsylvania.

H. E. Roberts, New Jersey.

Edmund Shilton, England.

G. L. Simpson, Pennsylvania.

J. A. Smalley, Iowa.

Christian Schunk, Germany.

A. M. Stewart, Pennsylvania.

J. F. Shannon, Pennsylvania.

Joseph T. Stradling, Pennsylvania.

F. C. Swartz, Pennsylvania.

Z. L. Waugaman, Pennsylvania.

M. B. Wengert, Pennsylvania.

Wm. Timothy T. Wallace, Ohio.

Garrison C. White, Pennsylvania.

Total, 64.

The following is a list of the prizes :

1. Wm. Lewis Cave, of Pennsylvania—prize of a dental engine, for the best specimen of plate work.

2. James G. Palmer, of New Jersey—prize of a set of Varney's plugging instruments, for the best thesis on the "Conservative Treatment of the Pulp."

3. L. Bischoff, of England, and Eduardo Gaviria, of South America—prizes of a gold medal, for best specimens of enameled platinum work.

4. W. Dammann, of Germany—prize of a gold medal, for the best examination in materia medica.

5. G. L. Simpson, of Pennsylvania, and H. E. Roberts, of New Jersey—prizes of a gold medal, for the best specimens of gold fillings in the mouth.

6. A. M. Lorenz, of Germany—prize of a gold medal, for the best thesis on peritonitis.

7. L. P. Cook, of Pennsylvania—prize of a gold medal, for the best dissection of the salivary glands.

8. R. F. Guenther, of Germany—prize of a gold medal, for the best thesis on necrosis of the jaws.

9. E. Dalmau, of Cuba—prize of a gold medal, for the best examination in chemistry.

10. Oscar Klein, of Germany—prize of a gold medal, for the best examination in physiology.

11. G. V. I. Brown, of Minnesota—prize of \$25, for the best final examination.

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COGSWELL DENTAL COLLEGE.—We have in type a letter from Dr. M'Lain on the subject of the Cogswell Dental College, which is unavoidably held over to our next issue.

## PHILADELPHIA DENTAL COLLEGE.

THE Eighteenth Annual Commencement took place at the Academy of Music, Philadelphia, on the 26th February. The following is a list of the graduates :

Charles F. Booth,  
Arthur S. Barnes,  
H. R. Beals,  
A. G. Bruce,  
George F. Barber,  
J. Edgar Blake,  
Alfred Burne,  
J. F. Clement,  
Martin B. Culver,  
William H. Carson,  
S. Parker Cottrell,  
L. S. Chilcott,  
Jessie F. Detchon,  
William C. Foulks,  
Fred H. Fales,  
J. S. Franklin,  
Leopold Greenbaum,  
A. H. Greenawalt,  
Edwin F. Hollingsworth,  
Henry Hofer,  
Arthur Hare,  
Herdie C. Herring,  
Johnson Husband,  
William A. Lee,  
S. Leslie Lecron,  
I. W. Larkworthy,  
Milton F. Lenox,  
Bernhard Lehman,  
W. S. Morrison,

B. Theo. Mooney,  
J. Allen Miles,  
Charles H. McNaughton,  
John J. McGrew,  
O. J. Marshall, L.D.S.,  
Phineas P. Nichols,  
James E. O'Brien,  
Fred W. Prehn,  
Frederick Primrose,  
James Primrose,  
Richard Parody,  
James P. Parker,  
Herbert B. Perry,  
William V. Randall,  
Charles A. Smith,  
Benjamin S. Scott,  
James W. Slonaker,  
George R. Shidle,  
Emil Sperling,  
Clare L. Smith,  
Charles H. Sherwood,  
Will X. Sudduth,  
Charles Berrington Stoner,  
Will F. Teeter,  
C. R. Templeton,  
Charles E. Ulmer,  
Elias Uribe,  
H. P. Wyman,  
J. L. Whytock.

The committee appointed to make the awards was not ready to report at the time of the Commencement.

ANCIENT DENTISTRY.—At the commencement of the Christian era we find in the writings of Celsus, a celebrated physician of Rome, very explicit instructions on the subject of several important operations on the teeth, and in excavations at Pompeii and Herculaneum several dental implements have been discovered.



## BOOKS RECEIVED.

TRANSACTIONS OF THE AMERICAN DENTAL ASSOCIATION AT THE TWENTIETH ANNUAL SESSION, HELD AT BOSTON, 1880. Publication Committee: Dr. George H. Cushing, Dr. M. S. Dean and Dr. E. T. Darby.

This is a volume of 167 pages of solid, valuable matter. There is no other dental organization in the world that could, at a regular annual meeting, present for its members so many really practical articles, so much food for thought in its discussions. It is unnecessary for us here to review at any length these Transactions, for a summary of them has appeared in the *MISCELLANY* from the months of September of last year to February this year, inclusive. We would say, however, that it is a book for the library. While progress is stamped on every page, yet every page contains evidence that there is an infinite realm of fact, yet pierced only by conjecture, to be fathomed. The American Dental Association realize this, and we may reasonably look for more valuable Transactions each succeeding year. The 1880 meeting will have disappointed nobody.

TRANSACTIONS OF THE EIGHTEENTH ANNUAL SESSION OF THE IOWA STATE DENTAL SOCIETY.

The Publication Committee (Drs. E. E. Hughes, T. A. Hallett and R. S. Rathbarn) are to be congratulated on the general appearance of this work, no less than on the excellence of the essays and the suggestiveness of the discussions.

NEW DEPARTURES.—New departures are always commendable when they are departures from evil.—*Dr. D. Van Denburgh*.

GEORGE ELIOT.—Several of those who have written in the newspapers about George Elliot's early life refer to the fact that she had, when a school-girl, a beautiful set of white, regular teeth. The fact that a perfect denture and a matchless intellect were found in the same person may be a coincidence. Was it?

THE TEETH.—The teeth are organized bodies, having nerves and absorbent and circulating vessels, but possessing a low degree of living power, and so dense a structure as to exhibit phenomena, both in their healthy and diseased condition, which are very dissimilar from those which are observed in true osseous structures.—*Bell*.

## NOTES.

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### UNHEROIC HEROES.

THE men who faced Sebastopol and carried it against the Russians, the warriors of Balaklava and Inkerman—all these were heroes. This is undoubted. But an English lady well-known in the world of letters—Miss Frances Power Cobbe—has just been assuring us that some of these heroes were wofully unheroic when they stepped into a dentist's chair. On such occasions their courage oozed out of their fingers' ends, as did that of the famous Bob Acres; or, to be more precise, it oozed out at the extremities of their vocal organs with so much friction as to cause sounds of moanings and groanings. Miss Cobbe says: "I once asked a dentist whether gentlemen or ladies gave him most trouble, and he replied, 'O, gentlemen, beyond question. I operated upon a great many officers just before they went to the Crimean war, and I assure you that many of them, who are now Balaklava and Inkerman heroes, behaved in a very unheroic way indeed in the chair in which you are sitting. Women scream a little, but are always ready to thank me for what I do for them. Men moan, and groan, and abuse me.'" Can some of our readers confirm or refute this theory as to the relative good behavior of their lady patients? Certainly it redounds to the credit of ladies if they bear pain with more fortitude than men, and under certain circumstances there is no doubt that they do. We are inclined to think that the experience of long years which many of our readers possess is replete with interesting reminiscences touching this question. Others have formed opinions more or less gallant to

the fair sex as to their power of self-command when submitting to the tender mercies of the dentist. Opinions concisely stated, and reminiscences, if extraordinary, will be acceptable to us.

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### A PERMANENT SET OF TEETH.

A FRIEND suggests to us that if artificial sets of teeth, which are used by some persons for a number of years, are called temporary, then a permanent set would be one which is handed down from father to son and worn through successive generations. Such a set would be permanent with a vengeance. Undoubtedly there have been artificial dentures which have partaken somewhat of this permanent character, and although it is by no means probable that such cases often occur, yet it is within the range of possibility. The objection may be urged that the teeth of a father would not fit the mouth of a son. It is true that in most cases they would not; but all practitioners have met, more or less frequently, with remarkable similarities in the configuration of the mouth in families. Then, again, scores of people are wearing artificial dentures which, while they might fit their mouths when they came fresh from the hands of the dentist, are now as much misfits as if they had been made for some other persons. The active practitioner is constantly meeting with patients whose misfitting artificial teeth might suggest that they were inherited from father or mother, as the case may be. We would not encourage children to make such appropriations of the personal property of their deceased par-

ents for obvious reasons; but when they disregard our discouragement (which, perhaps, will never sound in their ears), they certainly do their part to make artificial dentures "permanent."

#### DENTISTS' LEISURE.

SOME of our readers may say that they have no leisure—that they work from Monday morning to Saturday night without relaxation except for meals and sleep. To such we would express the hope that they are doing their work well, at the same time being of the opinion that no man should be so engrossed with his daily occupation as to have no time for recreation. Those who have no time to read, or who complain that they have no leisure, are, after all, to be pitied, and the friend who will do something to get them out of such tracks will be a benefactor. An aged man, who as a grocer had amassed a fortune, was seen one day in his store rolling a barrel of sugar along the floor. A friend went up to him and suggested that he should get some one else to do that, and he himself should enjoy some leisure and the good things that his industry had brought him. "Yes," was the reply; "don't you see I have now made \$3 on this barrel of sugar. I enjoy that." He was too low down, intellectually, to appreciate any higher enjoyment than making money out of barrels of sugar. We do not assume that there are dentists like this; but, after all, there are some worthy men who drum away at their monotonous tasks without intermission, and neglect that recreation which they need. How much better would our friends be if they would turn out of their offices frequently and in the open air study botany, geology, entomology—any branch of nature they desired. There are too many who confine themselves to their drudgery unremittingly. This is

not fair to themselves, and they will suffer for it in the future.

#### IS THE HUMAN STRUCTURE DETERIORATING?

DR. W. R. HOLMES says it is. In an article before us he speaks of the "gradual deterioration of the human structure, which has been operating for generations past, and is now culminating to such an extent as to be markedly observable." With the merits of this particular article we have nothing to do at this moment—they are deservedly praised in another column. But we do not think that the human structure is deteriorating. Rather do we believe in a grand work of evolution, which is gradually going on, evolving the superior out of the inferior. It may not be that we are as strong physically as were our forefathers of thousands of years ago, but brute strength is not necessarily superiority. The watches made to-day may not be as large as were those our grandfathers wore, but they are more delicate and exact pieces of workmanship, and we would not go back to the old style. Just so the human body, while, perhaps, it possesses less muscular force, possesses finer developed powers than did those of our more ponderous ancestors. The fingers have a finer touch, the eye a greater capacity for conveying to the brain a sense of the beautiful—all developed by the mental part of man. We prefer a humanity, the physical part of which is dominated by the mental (and this we are gradually rising to) to a humanity that is all animalism (which we are rising from). Decay of teeth is caused by mere local and, we believe, temporary causes, and is in no sense a result of human development. Rather is it an indirect result of a lack of the completeness of education which, we hope, the race will one day possess.

# JOHNSTONS' Dental Miscellany.

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VOL. VIII.—*April*, 1881.—No. 88.

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## THE CHEMICAL AND PHYSICAL EFFECTS OF FILLINGS UPON TEETH.\*

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BY CHARLES MAYR, A.M., SPRINGFIELD, MASS.

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THE task I have undertaken is almost too difficult for me. My practical experience in dentistry is very limited, yet I am to say to a body of specialists something about an art so greatly dependent on practical skill. But our century is no longer a century of wild, planless experimenting, of crude empirical knowledge. Everywhere the theories of sciences are invading domains so far regarded as only dependent on mechanical skill. Many special cases come up every day where one minute of scientific reflection is worth more than years of practical experience unsupported by knowledge. The science on which dentistry finally rests is chemistry; not the chemistry of beautiful experiments, of explosions, strong colors and reactions, but the most complicated part of the whole enormous science—the chemistry of albumen or physiology; and on this issue chemists—not the chemists of common people, who are not much more than drug-clerks or stone-diggers—have a word in dentistry.

Some chemists shirk all investigation into this most interesting but almost infinitely difficult branch of chemical science by the vague term *vital force*. They say that “live tissues are produced by

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\* Read before the Connecticut Valley Dental Society.



vital force, that vital force acts in the body," etc.; they think this vital force something inaccessible to laws, something beyond chemistry. Indeed, a lazy school-boy could not invent a better excuse for his not wanting to learn any more. How glad he would be if his teacher should say, for instance, "Now we have come in algebra to the equations of the third degree, they cannot be solved any more, and therefore you have finished your work." He believes it; and yet there are people who go much further. The same holds good of the term "vital force." People get tired of going further ahead, and are putting up for themselves an imaginary goal by this term. Yet, fortunately, the highest teachers of all countries never get weary of investigation; onward they move, and they now only use the term "vital force" instead of "resultant of mechanical and molecular forces acting in combination with albumen." The effects of this peculiar resultant are termed "vital effects" or "life;" be it now the life of the individual, or the cell, or the protoplasma-fibre. The great problem of physiology is to resolve this resultant into its components, and so to trace back the effects to their final and easier intelligible causes. It has been done with light, with sound, with heat to a large extent, with electricity and magnetism to a small extent, and in the coarser mechanical phenomena of astronomy and mechanics almost to perfection. It will be done with "vital force," taken in the sense in which I understand it. But we have hardly commenced to study the chemistry of albumen. Chemistry, this really divine science, is not yet one hundred years old, and the chemistry of albumen is hardly born. We know about the chemical constitution of albumen just about what Lavoisier knew some ninety years ago about sulphuric acid. All we know are a few approximate analyses and gross reactions like coagulating, etc., but no constitution is yet known, no formula assignable to the albuminous substances; we have not yet been able to explain the chemical effect of one albuminous substance upon another. If the adepts know so little about it, what wonder that people who are no adepts in chemistry ascribe chemical reactions to imaginary supernatural forces that exist as little as witches, sorcerers, and the host of other impossibilities invented by ignorance!

I would not give you these long introductory considerations if they were not to show how much still remains to be done, and to enable you to excuse me for the little new I can give here. It will require the Hercules power of a Newton or Kepler to bring light into this night of the chemistry of albumen.

If the chemistry of albumen—protoplasma—is still so little known, we hardly can expect that all the processes going on in a tooth should be better known. We scarcely realize how complex a structure a tooth is, considered chemically. There are at least thirty organic and inorganic compounds acting upon each other, mechanical contrivances in the tooth like canaliculi, pulp, etc., interfering with the mere chemical actions; so the more we know about a tooth, the less we know of it. All we know is, that every process in a tooth is chemical or mechanical—a third does not exist, since light, electricity, etc., all have to be grouped among the latter. Its origin and its decay are chemical processes, explainable by the reactions of albumen. I therefore shall not enter at all upon the causes of decay. I have to consider the facts as given. There is no doubt with me that one day science will be able to explain everything connected with the chemistry of albumen, and the effects and causes of diseases will be calculated just as exactly as the movements of the stars, of heat and light. The scientist, who, perhaps, will smile at our dark age, will calculate that, say four years and three months after a certain fever, the right bicuspid would commence to decay, if, some months before, that and that albuminous compound had not been taken. The dentist will then have to use more logarithms than instruments.

To-day we stand before the fact that, generally, the most skilled dentist is powerless to prevent the formation of cavities. He has to cure, but cannot prevent disease. By filling the cavity properly he can, as the facts show, check the onward course of destruction; and for this purpose he uses one or the other of the fillings now in the market. There are four kinds—gold, amalgam, basic salts of zinc, gutta-percha, omitting some of minor importance. Each filling acts in three ways—mechanically, thermally and chemically, sometimes by electricity. The effects will, further, be very different in young teeth and old teeth, “live” and “dead” teeth, etc. I shall not enter into the definition of live and dead tissue. I should like only to draw your attention to the histological difference between young and old teeth. Not that the grossly chemical composition is so very different, but there is a difference in the way in which it is distributed. In young teeth the protoplasma substances in the alveoles, in the pulp, and in the dentine itself, are still building up; the lime salts are not yet distributed, as in old teeth; the moisture is greater and the circulation quicker. As cir-

ulation is the essential feature of what we call live tissues, we are justified in saying that young teeth have more life. In old teeth the building-up has ceased, the protoplasma-fibres withdraw from the periphery where lime salts are accumulating, the pulp itself is slowly disappearing, the tooth becomes harder. Now this difference in teeth as to age, development, personal conditions, etc., is the cause of the differences of the action of the same fillings in different teeth.

Let us consider the fillings in the three directions—mechanically, thermally and chemically. The mechanical effect of a filling is chiefly produced during the process of packing it. With gold it consists in a relatively violent hammering. There is no doubt to me that this violence may be injurious. We are permitted to infer from a similar process in other parts of our body that any mechanical disturbance of the histological arrangement of organs will produce these effects. The injured parts will be fully restored by a relatively short process, or they will die, *i. e.*, the circulation will cease. The first effect will occur in parts with quick circulation, in muscles, etc., while the second effect is liable to occur in organs with already slow circulation. I do not doubt that many a failure of a gold filling is due to the injury the tooth-structure has experienced during the process of packing. As a disturbance of the circulation is chiefly injurious in young teeth from the above reasons, I should ascribe a part of the difference of the effect of gold-fillings in young and old teeth to the mechanical insult. That a tooth can be the seat of an inflammation seems to me to be beyond doubt. Inflammation is defined as a disturbance of circulation with a tendency to sloughing or secretion. As the slightest mechanical injury of a muscle may set up an "inflammation," it might be inconsistent to say mechanical injury cannot produce such an effect in a tooth. Inflammation takes the most varied forms; a cold, a boil, an iritis, a pimple, pneumonia, rheumatism, are special forms of inflammation. Now the effect of inflammation in a tooth will be—as everywhere—first, increased sensibility, then increased secretion, finally either slow restoration of the former condition or sloughing and destruction. We are fully able to observe the first stage and the last in every tooth. Caries is nothing but a slow ulceration similar to chronic ulcers everywhere. That mechanical violence can cause it, seems to me pretty well established by the analogy with other organs.

Among the mechanical effects of a filling must be counted that of excluding liquids. Though we do not know the exact relation, yet observation is in favor of the view that the buccal liquids have to be excluded from a cavity as well as possible, if there should not be danger. The idea that a gold filling excludes moisture absolutely, seems to me untenable. Even the most solidly-packed gold never is solid gold. Small cracks are everywhere. The best filling I read of had a specific weight of 18.0; as pure gold has a specific weight of 19.36, it follows that more than 7 per cent. were cracks. Gold certainly does not exclude the moisture as well as any of the other fillings. The mechanical effects of the other fillings while being packed are far less than those of gold, the use of amalgam and oxy-salts of zinc having almost no mechanical effect to speak of, while gutta-percha might sometimes be heated too high when put in the tooth. All these fillings exclude moisture better than gold.

The next effect of a filling is its thermal effect. We all know how sensitive organic tissues are to changes of temperature. I do not only speak of the organs generally protected against sudden changes, but even the organs exposed to all changes of weather since the existence of man, still show a most unpleasant sensitiveness to thermal changes. Take, for example, the mucous membrane of the nose. For thousands of generations it has been exposed to all kinds of weather, and still it is most sensitive to changes. The fact is, that ten degrees difference may produce a cold, which becomes chronic, destroys the os petrosum, the meninges, the brain, the person! How complex is here the connection between ten degrees change of temperature and the death of a person. I know such a case. Can we suppose that teeth are less liable to become diseased in consequence of changes of temperature? Certainly not, and I have some facts on my side. In countries where people are not in the habit of drinking hot and cold water—tea and ice-water—at their meals, diseases of the teeth are far less frequent than where they do so. We have Italy, Russia, China on one side—America, England and Switzerland on the other.

I shall not dwell too long on this point; let us only consider what fillings do in this direction. By a good heat-conducting filling we can carry changes of temperature within the tooth which are most sudden and violent. In sound teeth it takes at least five minutes for a change of only twenty degrees to take place, and then probably never throughout its whole mass. By a filling like gold, which con-



ducts two-thirds as well as the best conducting metal known—silver—we can bring the changes to tissues not only not accustomed to them, but even not at all prepared by slow increase. In nearly all such cases the change is sudden and great. Suppose a cavity of a depth of five millimètres (one-fifth of an inch) filled with gold. The person has been eating, say, an oyster stew of 130 degs. Fah.—the common temperature we like in such kind of broth. The gold filling carried the difference between the temperature of the broth and that of the mouth ( $130-98=32$  degs. Fah.) almost undiminished to the bottom of the cavity. (The diminution can be calculated; it is about 2 degs. Fah). The cavity around the gold filling has assumed the temperature of 128 degs. Fah. Now the person feels warm, and of course (?) drinks ice-water of 32 degs. Fah. Taking into consideration the specific heat of the gold filling, it will assume about 40 degs. Fah., which it carries with a diminution of the cold of about four degrees (that is, as if it was 44 degs. Fah.) into the interior of the cavity. The cavity will then assume 44 degs. Fah., the difference within one-tenth of a minute being  $128-44=84$  degs. Fahrenheit!—a change which in any organ whatever would produce a most violent inflammation, if such an organ should not be well accustomed to it, like the hands. Few persons would even escape a rheumatism in case the hand should be exposed to such changes. Now, what does such a derangement mean in a tooth? It means disease of the protoplasma-fibres, interruption of the circulation—necrosis: precisely what dentists observe. Young teeth, which are still more dependent on circulation, will be affected more easily than old ones, where the fibres are fewer, and which resemble, in some respects, an inorganic structure. As this disease takes place all around a gold filling, we might expect a zone of white necrotic dentine under such fillings.

Amalgam fillings have an effect similar to gold fillings, yet in far less degree, owing to their inferiority in heat-conducting power. For the comparison, I give specific heat and conducting power of the common fillings, from the most reliable observations and calculations:

					Specific Heat. Water=1.	Heat-conducting Power. Silver=1.
Silver,	-	-	-	-	·057	1·00
Gold,	-	-	-	-	·032	·60
Tin,	-	-	-	-	·056	·12
Platinum,	-	-	-	-	·031	·10

Amalgam,	-	-	-	·050	about ·09
Mercury,	-	-	-	·031	·03
Oxy-salts,	-	-	-	·130	·008
Gutta-percha,	-	-	-	·500	·000001
Dentine (natural),	-	-	-	·400	·006

We therefore see that the thermal effect of a filling not only depends on the heat-conducting power, but also on its specific heat ; so the more the latter approaches that of a tooth, the less is it liable to produce sudden changes. In this respect amalgam is almost 100 per cent. superior to gold. Specific heat will manifest itself by the speed of changes, while the heat-conducting power influences the intensity. The difference in the above example of a gold filling was 84 degs. Fah., while under the same circumstance amalgam would only have produced—

First heating, 104 degs.	} Difference, 46 degs.;
Afterward cooling, 58 degs.	

that is, the effect is only one-half, at the most, of that of gold. As to the relative speed of changes, it may be said that gold produces this change in one-tenth of a minute, amalgam in one-quarter of a minute. These figures may vary in different persons, locations of cavities, size and form of cavities, yet the fact will remain, that, other things being equal, amalgam fillings will produce only one-half the change of temperature of gold fillings in twice the time, therefore with far less insult for the tissue. I think that dentists have observed that the cavity under an amalgam is—almost without exception—sound, and formed by live tissue. We should consider very well the thermal insult of gold fillings in young teeth. Oxy-salts of zinc resemble dentine somewhat in their specific heat and conductive power. Calculation, as in the above example of a cavity, would give a difference of about 2 degs. Fah., which is almost insignificant. They may, in this respect, be considered identical with dentine.

Gutta-percha might rather have an opposite effect. The cavity around it will be kept at a more uniform temperature than if it was dentine, yet the difference would be only about  $\frac{1}{2}$  deg. Fah. in the above example. I might enter into the effects of fillings when being used, as to their distributing and transmitting the pressure of mastication evenly, but it would lead too far.

A third effect of fillings might be termed chemical. A filling may affect the substance of the teeth by affinities, or might protect it by

neutralizing the acid around it. In this respect gold is completely indifferent; it is not acted on by, nor does it act on, any liquid in the mouth. The filling is excellent, yet this excellency of the filling has its defect. It does not protect the tooth as oxy-salts do. Small cracks between tooth and filling are not filled up with oxidation and sulphurization products. Tooth and filling are never cemented together. This inactivity of gold, therefore, is very dangerous for the tooth, though not for the filling. But what do we wish to preserve?

It is quite different with amalgam. Though acted on but slowly by the liquids of the mouth, yet it is acted on sufficiently to fill up small cracks between tooth and filling and to become cemented to the tooth. The filling becomes tight by the same principle by which steam-boilers are made tight. The boiler-makers make the seams tight by oxidation, which they foster by certain mixtures. The rust fills up small cracks, so that a boiler of iron is far easier to make than one of silver or gold. With gold, in fact, it would almost be impossible to make a boiler, for this reason alone—because no hammering can fill up cracks as perfectly as oxidation.

Yet amalgams have another disadvantage—their shrinkage. The process of hardening of amalgams is one of crystallization, due to the formation of chemical combination. We know but few cases of such combination where the volume of the combination is the sum of the volumes of the elements. Generally contraction follows, rarely expansion. Tin and mercury form the following compounds:

$\text{Sn}_3 \text{Hg}$ , with 34 per cent. mercury.

$\text{Sn}_2 \text{Hg}$  “ 46 “ “

$\text{Sn Hg}$  “ 65 “ “

$\text{Sn}_6 \text{Hg}$  “ 75 “ “

The only compound without shrinkage is  $\text{Sn Hg}$ .  $\text{Sn}_3 \text{Hg}$  shrinks about 8 per cent. Theory gives, therefore, quickly the proportions of a good amalgam, supplanting years of planless trying. More than 75 per cent. of mercury cannot be combined chemically with tin. The excess will disappear in time, and cause a very great shrinkage. Similarly, with silver and mercury; many compounds are known with 64 per cent.  $\text{Hg}$ , 72 per cent.  $\text{Hg}$ , etc. All silver amalgams are very soft, shrink considerably, and lose relatively, easily, their mercury. Still less stable are compounds of gold and platinum and mercury. The mercury evaporates from

platinum as if no combination had taken place. The causes of shrinkage are therefore three: Crystallization, disappearance of mercury in excess, disappearance of "combined" mercury. I am at a loss to say why some amalgam-makers put gold or platinum in their amalgams, if it is not to give to their amalgams some nice taking name—gold amalgam. How a certain mixture will work is very difficult to tell beforehand, yet we may always get an approximation to the truth. I will not deal here with the other objection—that mercury might "get into the system" from an amalgam—it would show too much esteem for certain medical superstitions.

The oxy-salts of zinc act chemically. While being put into the tooth the chloride of zinc or phosphate of alumina will decompose a small quantity of lime salts; but this action will cease as soon as the filling has hardened—that is, the chemical union,  $\text{ZnO} + \text{ZnCl}_2 = \text{Zn}_2\text{OCl}_2$ , has taken place, and the very small quantity of carbonic acid, etc., formed is very easily absorbed and the tooth not further molested, nay, it is now even actively protected. These fillings are more easily decomposed by acids than the tooth substance; hence they neutralize the acid near the tooth and thereby protect the tooth. As a necessity, they will disappear, and that is what the average patient alone observes. He cares less about disappearance of the tooth than of a filling! Much remains to be done everywhere in the line of education and fostering the work of doing one's own thinking.

As oxy-phosphates resist far more—I made experiments on this point—than oxy-chlorides, they are to be preferred. The chemical effect of gutta-percha might be an unknown physiological one, yet grossly chemical, it is inactive, though resisting less the liquids in the mouth than oxy-salts, without protecting the tooth.

Fillings sometimes produce phenomena of electricity. I do not mean anything in the line of the so-called new departure, which displays all the errors possible as far as electricity is concerned. I mean contact or statical electricity, affecting nothing but the nerves, but often most markedly. Also in this line gold fillings are the worst, because of the great potentiality of gold in electrical combination. Oxy-chlorides and gutta-percha have no effect at all, and amalgam very little. By irritating the nerve constantly, as in a case of Dr. Stockwell's, where an amalgam filling was capped with gold, they may produce persistent neuralgia, and perhaps, physiologically, produce changes in the nutrition of a tooth. Yet, as the unpleasant-



ness is so very great, we will avoid it. It is unnecessary to say that only the contact of two *metals* produces such electricity, like a gold filling and a spoon or fork, etc.

I would sum up my conclusions thus: Gold is *the worst filling* in most cases. It should be used chiefly in old teeth. Amalgams should be used everywhere where the patient's fancies, notions and similar kinds of bias do not prevent it; while oxy-salts of zinc are the fillings for frail teeth, for capping pulps, etc. Yet let dentists never forget that none of them is the ideal filling. This is not a metal, it is a silicate, translucent like the tooth, not acted on by acids, capable of a high finish—in short, a filling resembling the tooth-substance as closely as possible. Let not the foggy dogma of the superiority of gold act on progress as the old mediæval superstitions acted on astronomy, physiology and zoology for so long a time. Because gold is so much life's only aim with most people, they forget that gold has no intrinsic claim to its superiority except long-sanctioned custom; that chemically it is far inferior to platinum, mechanically to iron, and still more to steel; that its color is not finer than that of brass. Unclear alchemistic ideas are still active everywhere. They are the worst obstacle to clear logical thoughts. The dentist has to educate people, yet first he himself must not be biased by the same scientific superstitions. Let him never get tired of searching for something better. We shall never reach perfection, and the field of researches is as boundless as space and time. So far the views of the theory—only the practical dentist can judge how far they are in accordance with his experience.

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#### THE ALUMNI OF THE BOSTON DENTAL COLLEGE.

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THE Tenth Annual Meeting of the Alumni Association of the Boston Dental College was held at the College Building, 485 Tremont street, on March 2d. The following were elected officers for the ensuing year: President, Dr. R. R. Andrews, of Cambridge, Mass.; First Vice-President, Dr. Leon Rideout, of Lynn, Mass.; Second Vice-President, Dr. R. L. Robbins, of Boston, Mass.; Secretary, Dr. Edgar O. Kinsman, of Cambridge, Mass.; Treasurer, Dr. Geo. C. Ainsworth, of Boston, Mass.; Executive Committee, Drs. Wm. P. Leavitt, L. C. Bryan and H. A. Baker, of Boston, Mass.

EDGAR O. KINSMAN, Secretary.

## THE COGSWELL DENTAL COLLEGE TROUBLE.

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TO THE EDITOR OF JOHNSTONS' DENTAL MISCELLANY :

*Sir*—The tenor of an article which appeared as an editorial in the December number of the MISCELLANY, entitled "West Coast Dentists at Variance," is so at variance with the real facts of the case that I trust you will pardon me for attempting to remove the evident misapprehension under which you seem to be laboring in reference to this matter.

In the first place, no variance whatever exists between the dentists of this coast as regards the establishment of a dental college in San Francisco, as, having had no voice in the matter, the members of the profession here have had no occasion to accept or reject the endowment which Dr. H. D. Cogswell made for that purpose. Hence the noise that one or two officious and biased individuals have made is not to be taken as an evidence that there is any contention among the dentists here in relation to this college question, or that they are making war upon Dr. Cogswell.

The truth is, he appropriated a certain piece of real estate for the use of a dental college, and intrusted its establishment and organization to the University of the State of California : but the donation being hampered with so many onerous or otherwise disadvantageous conditions, the Regents, armed as they are with only clerical powers, have found it utterly impossible, without means, to make some architectural changes to the building in order to adapt it for the purposes required, and much less to procure those indispensable appliances so necessary to the proper conduct of such an institution.

Moreover, the property has, so far, proven almost entirely unproductive of revenues ; but, even were it otherwise, the Board of Regents is inhibited from appropriating funds derived from the rentals for any other purpose than for that which is specified in the bequest. Hence, acting under serious restraints, the Regents have been unable to proceed farther toward organizing the college than to fill some of the dental chairs, wisely deferring the opening until the institution could be inaugurated under the favorable condition of thorough equipment in all essential details.

The dental faculty, to which Dr. S. W. Dennis and myself belong, thought at one time of soliciting contributions from the dentists of this coast for the purpose of starting the school ; but the Regents, in whom are legally vested all powers for its organization, might view

this action on the part of the professors as an infringement on the rights of a superior body, so they have hesitated in adopting this course.

Now, this all-embarrassing obstacle—the want of funds—to the early and successful operation of this college could soon be overcome if Dr. Cogswell would simply remove some of the restrictions he has placed upon the bequest. He might, in the first place, give up, without any reservation, the entire property to the cause of dental education, abrogate that clause which appropriates the revenues accruing from rents for the support of a chair in “Moral Philosophy,” and at the same time enlarge the powers of the Board of Regents so as to give it more latitude in providing for the finances of the college at its inception. A few other minor changes might be advantageously made, but those specified will suffice to accomplish the desired end.

With these modifications, which are perfectly feasible, and which Dr. Cogswell could easily effect without in the least militating against the working of his enterprise, the ghost of the “white elephant,” as you so aptly term it, would forever be laid, while the occupation of one or two of those officious grumblers who flourish here as elsewhere would completely vanish, to the infinite good of the college.

As regards the objection you allude to as being made against the proposed college bearing the donor's name, it has no actual foundation as far as I know. An observation, however, has been casually made regarding the inaptitude of a State institution being designated simply by an individual's cognomen, instead of the appellation, as it should be, of “The Dental Department of the University of California.”

Respectfully yours,

A. F. McLAIN, M.D., D.D.S.

San Rafael, Cal., Jan. 31st, 1881.

[NOTE.—We publish Dr. McLain's letter because, in the first place, we believe in his sincerity, and because we have no desire that one side only of the question should be represented in our pages. We cannot but feel, however, that the Doctor is a little mistaken in some of his remarks and deductions. He affirms, for example, that “no variance whatever exists between the dentists of this coast.” If this is so, then we do not understand the significance of the word “variance.” Knowing that some members of the profession are opposing Dr. Cogswell's scheme with all their might, and that others are opposing them with equal determination, we feel

that we were quite justified in stating that "variance" exists. Dr. McLain talks about the onerous conditions with which the bequest is hampered. But the only one that he names is that which provides that a chair of "Moral Philosophy" be supported by certain rents. Dr. McLain wants all these rents to go to the support of the Dental College. Is not Moral Philosophy needed in San Francisco? Is not property that is worth \$20,000, which has been offered to the dentists independently of that also set apart for the teaching of Moral Philosophy, worth having? Is not the conduct of the opponents of Dr. Cogswell's scheme something like that of a rather petulant child who refuses a gift because the donor dispenses some of his good things to a brother? All the other "onerous conditions" are passed over. We are not told what they are. Lacking this information, we are obliged to fall back on the conclusion that we came to at first—that there are none worth being regarded as such. We cannot accept as an "onerous condition" the fact that Dr. Cogswell has only given \$20,000 to the Dental College. That it is regarded so is a standing proof that a chair of Moral, or some other philosophy, is very much needed in San Francisco. Whatever is the end of this particular controversy, we hope San Francisco will soon have a dental college and Moral Philosophy classes too.—Ed. J. D. M.]

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## STATE LAWS REGULATING THE PRACTICE OF DENTISTRY.

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ALABAMA.—A copy of the Act to regulate the practice of dentistry, passed by the State Legislature, has been forwarded to us. It provides that dentists who have been in the regular practice of dentistry for five years next preceding the passing of the Act shall not be required to submit to an examination, and shall be entitled to a license without fee. All others shall be allowed to practice only on their passing the examination of a Board duly authorized to grant licenses.

WEST VIRGINIA.—A similar Act passed by the Legislature of this State provides that all persons engaged in the practice of dentistry at the time of the passage of the Act shall not be interfered with by it. All others shall be required to produce a diploma from some duly-qualified dental college, and also to pass the Examining Board of the Congressional district in which application to practice dentistry is made.

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## FIRST DISTRICT DENTAL SOCIETY (NEW YORK).

THE usual Monthly Meeting of the above Society was held at the office of Dr. J. B. Littig, 9 East Seventeenth street, New York, on the evening of the 1st of March. There was a good attendance of members, Dr. J. W. Clowes presiding.

## THE CLINIC.

Dr. C. F. W. BÖDECKER said that the clinic was a very interesting one. "The attendance was between seventy-five and eighty. The first operator was Dr. A. J. KURTZ, of Lancaster, Pa., who filled a left upper first molar, the pulp of which was dead. The cavity extended from the mesial surface to the grinding surface. The Doctor filled the upper parts of the pulp canals with gold; the lower part as well as the pulp chamber was filled with oxy-chloride of zinc. Quarter Century cohesive gold, folded to Nos. 32 and 64, was used, and impacted by the aid of the electro-magnetic mallet.

"Dr. M. H. WEBB prepared a right upper second molar for Dr. Meigs. There was nothing of the tooth left but a little part of the buccal wall. Dr. Webb intends to build this up with gold at the next clinic, which will undoubtedly be an interesting operation.

"Dr. RYNEAR filled four cavities—one in the buccal surface of a left lower third molar near the gum, using hand pressure, and another in the grinding surface of the same tooth, where the Atkinson (lead) mallet was used, and one cavity in each buccal surface of the first and second left lower molars, in which the Doctor used the steel (Dr. Brown's) mallet. The object of using different mallets was to demonstrate that Dr. Rynear did not in every case use the same mallet. All the cavities except that one in the grinding surface of the third molar were small cavities, and filled and finished in thirty-four minutes.

"Dr. REESE presented a case of Reese's Metal. The casing was as perfect as it could be, and the color almost like a gold plate.

"Dr. KIMBALL presented a case of irregularity of some importance."

## INCIDENTS OF OFFICE PRACTICE.

Dr. C. E. LATIMER said that a lady came to him a few days ago suffering from neuralgia and chronic disturbance. She was in a very weak state. There was disease of the maxillary sinus, caused by five teeth, the pulps of which were devitalized. The lateral crown had been destroyed by decay and by the excising forcep. There

were two fistulae on the gums, one fistulous opening in the roof of the mouth, and a free discharge of pus on pressure. At night there was a discharge of pus down the throat. The patient was under medical treatment. There was no doubt that excessive wedging was the primary cause of the trouble. He (Dr. Latimer) advised extraction of the teeth, the removal of the dead processes and the treatment of the antrum. The case is under advisement and nothing has yet been done.

Dr. W. H. ATKINSON said he should be very glad for Dr. Latimer to prove that the devitalization of the pulps in the case he had quoted was due to wedging. Experience goes to prove that a very small proportion of the pulps of teeth can be destroyed by wedging, and dentists should be very chary in accepting such a diagnosis. He had seen cases—and he now referred to one in particular—where it was possible to put the finger between the first and second molars, they having been wedged so excessively. But by careful treatment they were brought together again, and to-day are doing good service. It is wrong for a man to assume that wedging is the cause of death to pulps without he can prove it. A thousand other causes might be suspected before that of wedging. At the same time, the old system of wedging is an execrable one. The discussion they were entered on opened in one's mind a chasm of horrors when reflecting on the want of knowledge of molecular metamorphoses possessed by those who profess to diagnose without sufficient knowledge, to the injury of young men. Surely there is some other way of dealing with good teeth that are pulpless besides extracting them. Pulpless teeth may be made to last thirty years or more, and are so made to last, and do good service, the only thing against them being that they are dark. It was a question whether the case Dr. Latimer had cited was capable of being treated at all by a medical man—one who expects to treat local lesions by constitutional management solely. The only case of a pulpless tooth, the pulp chamber of which should not be opened and cleaned out, is when it is not sealed at the foramen so as to prevent the increase of the disintegrating agent. In the majority of cases it is better to go through the foramen and into the territory a little way above the root of the tooth, where a latent if not an active abscess will nearly always be found. He (Dr. Atkinson) had a case recently that came from the hands of a very excellent operator at Newport, of a left superior second bicuspid that penetrated the

antrum. It was opened up and the diseased antrum entirely cured. The root is now filled with oxy-phosphate of zinc and the crown with gold, and it is doing good service. In such cases over-treatment is almost as bad as under-treatment.

Dr. LATIMER said he hoped to have brought the patient he referred to, to the clinic, but she was too nervous. It is an extreme case—one of the worst cases of diseased antrum that he had ever seen—because of the low vitality of the patient's system. It is, too, very interesting, because of the prominence of the man who did the mischief.

Dr. ATKINSON said he desired to point a moral for the practitioners of dentistry. They are all liable to make mistakes, and any one who has not a kindly feeling for a man who has fallen into the mud is not fit to be a dentist. The man who protects another's reputation when he knows the truth to be against him is only pushing the darkness further. Medical men are a noble set of fellows, but they have been led into the error of saying concerning each other, "For the sake of the reputation of another we will suppress the truth." Is it for the advantage of practitioners to defend iniquitous ways? Some men have used arsenic to such an extent that it would take every dentist all their lives to remedy a fraction of the mischief that has been done in the best families. Men learn a great deal more by their mistakes than by their successes.

#### ARTISTIC DENTISTRY.

Dr. E. PARMLEY BROWN said it had struck him that there are three points toward which dentistry has been pressing during the last ten years. They are, first, to decide on material with which to restore dental organs; second, the form in which to make the restoration; and third, the means to apply the material. Two of these three questions are settled. Cohesive gold is the material, from which he believed there would be no appeal. Contour restoration is the form which best imitates Nature. But the means to apply the material is still a mooted question. Hand-pressure, steel mallets, automatic mallets, electric mallets, lead mallets, pneumatic mallets, rubber mallets, ivory, tin, wood and engine pluggers—all have their advocates. What is wanted is that method which harmonizes with the health of the operator, with the comfort of the patient, and with the substance on which the material is being placed.

Dr. M. H. WEBB here presented a model of, and described, a

case he had in practice, in which the patient had broken the crowns off all the incisor teeth by accident.

Dr. ATKINSON (replying to Dr. Brown's remarks) said that there is no one best way to do anything on earth, and it is of no use for dentists to think that they will ever find out one best way of performing their work. Each individual operation is *sui generis*. It is not a representation of anything else. A man must be master enough of his own capabilities to do that which is right and best in each case. No man should be a copy of another—each must have his own methods. There may be similarities, but that is all. He did not think he ever filled two teeth that he was equally well pleased with. Sometimes when thinking he had done the very best thing, he would look over it again and be disappointed. It is wrong to suppose that the electric or any other mallet in the hand of a ninny can do anything.

Dr. E. PARMLY BROWN said he had had four cases lately of fracture of the superior central incisors in young patients. Two of the cases were in one month. In three of these cases he had succeeded in building them down with gold, and now no gold whatever is visible, and the teeth look as if nothing had happened to them. Lately he had a patient (a girl 13 years of age) from Cincinnati, who had broken off about one-third of a central incisor. On examination it was found that the pulp was dead. The tooth was built down with gold, and he hoped to be able to dress it off gradually and have a perfect tooth there. In another similar case a lady from a distance presented herself with the pulp dead, and some irritation had set in. The tooth was very sore, but, as the lady desired to return home at once, he took out the pulp, filled the pulp-cavity with gutta-percha and left it, intending to build down the tooth next day. It was found then to be too tender to bear pounding, but a screw-clamp was fixed on to it, and he pounded at the tooth for three and a half hours, building it up, and causing scarcely any pain. On the following day the operation was finished, and was entirely satisfactory.

Dr. G. W. WELD spoke of a case he had had similar to that reported by Dr. Webb.

Dr. WEBB thought that artistic dentistry means not only the proper estimation of the contour of missing teeth, but also proper care of the teeth of patients from childhood up. It means keeping teeth clean, clear, bright and beautiful. Dentists should exercise their artis-



tic skill and taste with the same purpose that they are exercised by the artist on the canvas or in marble. They should exercise their utmost skill, not because they like their fees less, but because they love to perform their first-class operations more. The consideration of fees ought not to influence those practicing in a specialty of medical science. Money should only be used as a means to an end ; but if obtained at the expense of principle, there falls into their train consequences to which want itself would be preferable. It is better to drink the dregs of abject poverty than to luxuriate in wealth acquired dishonorably. The properly-qualified practitioner should always do his best, and be content with the reward which his performance is sure to win for him.

Dr. LATIMER said that he had just heard of the breaking of a Richmond crown. It had broken off, leaving the ring and the rivets. The dentist who had had the case in hand removed the ring from the root, cut off the oxy-chloride, and found it was exceedingly offensive to the smell. The patient said she had suffered so much pain with it that she would not have another crown applied under any consideration.

Dr. WELD said he had had two cases of the Richmond crown fail by breaking of the pin between the artificial crown and the cylinder that is placed in the root.

Dr. LITTIG said that a crown which Dr. Richmond put on for one of his (Dr. Littig's) patients lasted about three months, when it all came away, carrying with it a portion of the root. The severity of the operation was so great that the patient could not be induced to put another in.

The meeting then adjourned.

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#### THE SOUTH CAROLINA STATE DENTAL ASSOCIATION.

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THE Eleventh Annual Meeting of the above Association will be held on the 3d of May, 1881, at Cheraw. Applications for license by examination and diploma, will receive the attention of the State Board of Dental Examiners at the above time and place.

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#### THE TEXAS STATE DENTAL ASSOCIATION.

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THE above Association meets at Austin, Texas, on the 14th of May next.

W. R. CLIFTON, Corr. Secretary.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

ORDINARY MONTHLY MEETING, FEBRUARY 7TH, 1881.

THOMAS A. ROGERS, Esq., President, in the chair.

The minutes of the preceding meeting having been read and confirmed, the President delivered his inaugural address.

CASUAL COMMUNICATIONS.

Mr. COLEMAN showed two upper temporary canines with bifurcated fangs, also another specimen of the same tooth in which the root was deeply grooved on each side, and showed a tendency to bifurcation at the apex. Since these teeth were seldom extracted until the root has been more or less completely absorbed, it was not often that an opportunity was afforded of examining it; possibly, therefore, the irregularity now shown might be more common than had been supposed.

With regard to irregularities in the roots of the permanent teeth, the most common deviation from the normal form was to find an upper third molar with four fangs; the next most common irregularity was a lower first molar with three fangs; after that came lower canines with two antero-posterior fangs, and then an upper bicuspid with three fangs. Further than that he would not venture to go, but he believed that the rarest example of this class was a lower bicuspid with two fangs. The tooth he now handed round was extracted from the mouth of a female at the Dental Hospital. It occupied the position of the second bicuspid, but, as all the teeth behind had been lost, there might possibly be some doubt as to what it really was. He thought, however, that those who would take the trouble to examine it carefully, would agree with him that it could not be a retained second temporary molar, or a first permanent molar, and that in fact it would not be anything but a bicuspid, although it had two divergent fangs.

As to the mode of development of the fangs, dental literature was almost silent; the description of tooth development generally terminated with the completion of the crown. At this stage the odontoblastic layer, or *membrana choris*, might be compared in form to a paper bag. If but one principal vessel ran up to the pulp, the membrane on further development became contracted round it, until it terminated in the apex of the root. And, where two or more principal vessels existed, contraction took place around them in like

manner, the membrane being drawn in and meeting between them, thus forming separated fangs.

Mr. HUTCHINSON showed an upper bicuspid with three fangs which had been presented to the museum by Mr. Brindley, of Sheffield.

Mr. CHARLES TOMES showed a first upper molar which had been sent by Mr. Tod, of Brighton. Being very carious, Mr. Tod extracted it, and then found on the anterior surface of the neck, below the level of the ordinary enamel, a small enamel nodule, while matching it on the posterior surface was a similar nodule. On looking at the anterior surface of the second molar, which was still *in situ*, another enamel nodule was found occupying the same position. The symmetrical production of these nodules was very curious.

Mr. TOMES also showed a portion of an elephant's tusk, the section showing a rough-walled cavity surrounded by large deposits of secondary dentine. In this cavity a bullet had been found lying loose. The animal had evidently been shot at, the bullet lodged in the tusk, where it had set up irritation and had been the cause of this excessive formation of the secondary dentine.

He also showed some specimens of Mammoth ivory. These animals, which had been extinct for probably a great number of years, were still occasionally found preserved in the ice cliffs of Northern Siberia in so perfect a condition that the character of the skin and color of the hair could be distinguished; the stomach had even been found entire, and containing fir cones. In such specimens the tusks especially were found in good condition, scarcely differing from fresh ivory. But others had been more exposed to the weather, had been washed about by floods, and had undergone partial disintegration. On looking at a transverse section of one of these tusks a great number of interglobular spaces would be seen, arranged in contour lines. After long exposure the tusks became broken up, the fractures following the course of the interglobular spaces, and presented the appearance seen in the second specimen.

Mr. HUNT (Yeovil) said that a writer in an American journal he had been reading lately, speaking of a case in which great absorption of the alveolar process had taken place, said he had been obliged to resort to the old-fashioned device of spiral springs. Similarly he supposed that some of those present were occasionally obliged to resort to the old-fashioned device of tube teeth, and had found it a difficult matter to countersink the tube. He had

lately met with some little instruments which answered admirably for this purpose. They were some diamond drills sold by Mr. J. S. Glen, of 370 King's road, Chelsea. They were composed of the ordinary black diamond mounted on split iron wire, and were made of various sizes to drill holes of from  $\frac{1}{32}$  to  $\frac{1}{4}$  inch in diameter. They were very cheap, and, as proof of their efficiency, he might state that, after fitting one to a lathe chuck, he drilled a hole, first through the bottom of a thick glass tumbler and then through one of the Messrs. Ash's long molars.

Mr. COLEMAN said he thought they might be adapted for use in the mouth. It was often difficult to make a hole through the enamel with a steel instrument—it was apt to slip. He thought that when it was necessary to drill into the pulp cavity, one of these instruments would be useful to make a commencement.

Mr. HUNT said he scarcely thought that the rectangular form of the crystal rendered it suitable for cutting enamel or dentine, but he had found it very useful for such purposes as he had already indicated.

Mr. ISIDOR LYONS read notes of a case of swallowing artificial teeth. The patient, a man aged thirty, went to bed wearing his artificial teeth; during the night he suddenly awoke with a choking sensation and found that his false teeth had gone. He concluded that he had swallowed them and at once went to a neighboring doctor, who passed a probang: the patient felt something move and for the time was relieved. The doctor then gave him some castor oil, and sent him home. But on lying down again the patient felt worse, and at 5 A. M. he was brought to St. Bartholomew's Hospital. On admission he complained of pain in the neck just above the upper border of the sternum, and could not swallow without much pain and difficulty. No attempt at removal was, however, made until the following day, when Mr. Thomas Smith, having first felt the plate with an ivory-headed probang, succeeded after several attempts in seizing and extracting the plate with a pair of long œsophagus forceps.

After the operation the patient was able to take liquid food without much difficulty, and a week afterward he was discharged quite well.

Mr. COLEMAN said he thought the use of the probang in this case was unwise; it certainly added to the difficulties of the case. It should be used only as a last resource.



Mr. HUTCHINSON said that in a case he knew of the medical man who was called in ordered the patient to eat twelve penny buns.

Mr. WEISS remarked that the best treatment in such cases was to cut up some worsted into short lengths, stir this into thick oatmeal porridge, and give the patient plenty of it. The worsted became entangled with any sharp points about the plate and covered them, thus greatly lessening the risk of injury to the stomach or intestines. The administration of castor oil, or any purgative medicine, was the worst thing to do.

Mr. CHARTRES WHITE said a lady patient of his once came to him in a great state of anxiety on account of having swallowed her false teeth. They were on a long narrow plate which was fixed on each side by rigid wires. He ordered her to eat plenty of suet dumpling and new bread, and two days afterward the plate passed her anum without causing any damage.

The PRESIDENT said that although there might be nothing remarkable about this case, still he thought that it was as well that occasionally, attention should be drawn to the frequency of this accident, else the subject was apt to be forgotten.

Mr. PERCY MAY showed a model of the upper jaw of a patient aged twenty-one presenting the following peculiarities: The laterals and bicuspid were absent, while a temporary molar was still in place on each side. That on the right side was decayed and was loose and painful, so Mr. May extracted it. On probing, he could not detect any tooth beneath. The patient had nine sisters and a brother; the mother of the family and one sister had the same irregularity.

The meeting then terminated.

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#### GEORGIA STATE DENTAL SOCIETY.

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THE next regular Annual Meeting of the above Society will be held in Savannah, May 10th, 1881. The State Board of Dental Examiners meet at the same time and place.

R. W. THORNTON, President.

L. D. CARPENTER, Corr. Secretary, Atlanta, Ga.

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QUACKERY.—It is an old complaint, and unhappily, though old, not an obsolete one, that ignorant pretension, especially when wrapped in mystery, is more attractive to the million than modest ability.

INTERNATIONAL MEDICAL CONGRESS, LONDON.

AUGUST 2d TO 9th, 1881.

SECTION XII.—DISEASES OF THE TEETH.

Edwin Saunders, Esq., President; John Tomes, Esq., F.R.S., and Charles Spence Bate, Esq., F.R.S., Vice-Presidents; C. S. Tomes, Esq., F.R.S., Secretary.

PROPOSED LIST OF SUBJECTS FOR DISCUSSION.—1. Replantation and transplantation of teeth. 2. Premature wasting of the alveoli, and its amenability to treatment. 3. The share taken by septic agencies in causing diseases of the dental pulp and periosteum. 4. Mercurial and syphilitic teeth; and the causes of irregularities of position of the teeth. 5. Erosion of the teeth. 6. New dental instruments and methods of operating.

The President and Secretaries will feel obliged by your sending a reply, stating if it is your intention to be present at the Congress, and if you have any suggestion as to subjects for discussion. Papers on other subjects will be received and read before the sections, these being specified only with a view to promote fruitful discussions. Early notice of papers is particularly requested. All communications regarding Section XII. should be addressed to C. S. Tomes, Esq., 37 Cavendish square, London, W.

The following circular has already been privately distributed in the United States; but as it is impossible thus to reach all who may be disposed to favor us with their presence or with contributions from their pens, it is here published: .

“INTERNATIONAL MEDICAL CONGRESS, SEVENTH SESSION, LONDON,  
1881.

“*Sir*—We have the honor to inform you that at the close of the Sixth Session of the International Medical Congress held last September in Amsterdam, under the Presidency of Professor Donders, of Utrecht, a unanimous desire was expressed that the next meeting should take place in Great Britain in 1881. This desire having been communicated to the Presidents of the Royal Colleges of Physicians and Surgeons in London, they convened a meeting of delegates from the various universities, colleges and other public bodies of the United Kingdom, including the principal medical societies, the British Medical Association and the medical departments of the Army, Navy and India Office, in order to obtain a thoroughly

national representation of feeling and opinion. The response to this appeal having been most cordial, it was decided at the meeting of delegates thus convened to comply with the wish expressed at the meeting at Amsterdam, and to hold the Congress in London. A General Committee of Organization was appointed, an Executive Committee and a Reception Committee to carry out the necessary details.

"In past years the International Medical Congress has met in the following cities: The first meeting took place in Paris in 1867; the Congress next met in Florence in 1869; then in Vienna in 1873; in Brussels in 1875; in Geneva in 1877; and last year, 1879, the Congress, as already stated, met in Amsterdam. Her Majesty the Queen has most graciously given proof of her good-will toward the cause of medical science and our efforts in its furtherance by authorizing us to place the Congress under Her Royal patronage. His Royal Highness the Prince of Wales has likewise shown the unvarying interest he takes in the progress of medicine by according a similar favor. The work of the Congress will be carried on in fifteen sections. The days of the meeting will extend from Wednesday, the 3d, to Tuesday, the 9th of August, both days included. A Reception of Welcome will take place on the evening of August 2d. The meetings will be chiefly held in the Halls of the University of London and in Burlington House, where, in a most liberal manner, the use of rooms for the General and Sectional Meetings has been granted to the Congress by the authorities of the University of London, the Royal Society, the Society of Antiquaries, the Astronomical Society, the Linnean Society, the Chemical Society and the Geological Society. There will be a Museum open during the meeting, to which contributions of professional interest will be made. Evening receptions will be held and excursions arranged to various places of interest.

"The attendance of our countrymen from all parts of the United Kingdom, India and the Colonies will probably be large, and various circumstances make it probable that a large number of distinguished men from many countries will be attracted to England as our guests on the occasion of the Seventh Session of the Congress, and it is our desire to receive them with all cordiality and honor. It is convenient to inform our colleagues abroad that ladies will be invited to the social and ceremonial meetings of the Congress, but will not be admitted to its business meetings. It will be necessary for all who

wish to make communications to the Congress to intimate their intentions to the Secretaries of the several Sections and to furnish an abstract of their papers before the 30th of April, when the Committee hope to complete the arrangements for the meeting and to issue a programme of the business. We have the honor to be, Sir, yours faithfully,

"J. RISDON BENNETT, Chairman of the Executive Committee.

"WILLIAM MAC CORMAC, Secretary-General."

All communications respecting the general business of the Congress should be addressed to WILLIAM MAC CORMAC, Esq., Hon. Secretary-General, 13 Harley street, London, W.

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### THE CENTRAL DENTAL ASSOCIATION OF NORTHERN NEW JERSEY.

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THE above Association held its Annual Meeting on February 24th, at Orange, at the office of Drs. Richard & Levy. The attendance was large from all the Northern counties, and the discussion on "Necrosis" (the subject for debate) very interesting, several cases being present for examination. An exhibition of several new appliances was also shown. After the debate the annual election of officers was held for the ensuing year with the following results: President, Chas. A. Meeker, Newark; Vice-President, F. A. Levy, Orange; Secretary, G. Carleton Brown, Elizabeth; Treasurer, Dr. C. McNaughton, Jersey City. Executive Committee—Drs. J. Allen Osmun, Newark; W. P. Richards, Orange; J. G. Palmer, New Brunswick; E. H. Bunting, Newark; F. C. Barlow, Jersey City.

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### BOOK NOTICE.

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ZAHNÄRZTLICHER ALMANACH, 1881, by Dr. Adolf Petermann, is invaluable to dentists who live on the European continent, giving, as it does, the names of the members of the profession who live in the German empire, Austria and Hungary. It is excellently printed, and contains two well-executed steel engravings.

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IS THE ENAMEL ORGAN VASCULAR?—So simple a matter as the vascularity or non-vascularity of the enamel organ is not yet settled. Wedl asserts that it contains no vessels; Magitot and Legros share this opinion. Dr. Lionel Beale, on the other hand, states that a vascular network lies in the stratum intermedium.



## OHIO COLLEGE OF DENTAL SURGERY.

At the Thirty-fifth Annual Commencement of the Ohio College of Dental Surgery, Dr. G. W. Keely, President of the Board of Trustees, delivered an address and presented diplomas to the following graduates :

C. S. Archer, Indiana.	W. V. Grove, New York.
P. D. Anderson, Kentucky.	B. P. Ingram, Ohio.
D. A. Askew, Mississippi.	E. L. Jauncey, Illinois.
E. S. Bowen, Massachusetts.	G. S. Junkerman, Ohio.
H. W. Brodbeck, Indiana.	W. C. Jeffry, Indiana.
E. P. Binford, Indiana.	Julius Klethke, Prussia.
O. Buckwalter, Ohio.	J. D. Morris, Ohio.
J. S. Converse, Ohio.	S. H. Millikin, Ohio.
S. B. Cook, Tennessee.	J. B. McGee, Kentucky.
C. C. Corbett, Vermont.	Zeno F. Meyer, Wisconsin.
T. Y. Cooper, Kentucky.	S. D. Myers, Ohio.
F. H. Deterding, Pennsylvania.	C. B. Orbison, Ohio.
John Donovan, Ohio.	W. G. Price, Indiana.
H. D. Eggers, Kentucky.	E. H. Rothe, Ohio.
T. H. Foulds, Ohio.	J. E. Robinson, Ohio.
W. L. Hughes, Kentucky.	B. G. Rees, Kentucky.
Al O. Howe, Ohio.	E. C. Sears, Ohio.
J. C. Herron, Maryland.	R. C. Taylor, Ohio.
C. E. Hale, Minnesota.	Edward Pittwood, Illinois.

E. H. Hawkins, Ohio.

The following prizes were awarded :

T. H. Foulds, jr., for best examination ; dental engine.

Al. O. Howe, best essay on "Dental Hygiene;" Farrar's abscess syringe.

John Donovan, best essay, "Inflammation;" medicine case.

G. S. Junkerman, best analysis of saliva ; gold medal.

T. H. Foulds, jr., best essay on microscopy ; microscope.

S. B. Cook, best operating dentist ; set of Varney's pluggers.

C. S. Archer, best continuous gum specimen ; bracket.

Junior prize—Frank Cunningham, best metal-soldered plate ; bracket.

EDUCATION.—To subserve its highest ends education should harmonize, and so perfectly blend the capabilities and capacities of body, mind and soul, neither being cultivated at the expense or neglected to the advantage of the others, that true manhood, in its physical proportions, mental capacities and moral activities, may result.—*Dr. D. D. Smith, Philadelphia.*

# UNIVERSITY OF PENNSYLVANIA (DENTAL DEPARTMENT).

THE Annual Commencement of the above was held on March 15th at the American Academy of Music, Philadelphia, when the degree of Doctor of Dental Surgery was conferred upon the following :

Abbott, Sumner B., Pennsylvania.	Martin, Christopher C., Louisiana.
Barclay, Wm. H. (M.D.), Pennsylvania.	Martin, Edwin M., Pennsylvania.
Baxter, Walter W., Canada.	Martin, Robert B., Louisiana.
Biggar, Miles R., Canada.	Mascort, Augustin E., Cuba.
Brister, James, Pennsylvania.	Mason, Burr T., New York.
Campbell, J. Harrison, Pennsylvania.	Maxfield, George A., New Hampshire.
Cornog, Albert, Pennsylvania.	Meaker, Cyrus T., Pennsylvania.
Downer, Milton J., New York.	Molina, Jose Justiniani y, Cuba.
Ellis, Charles J., New York.	Morse, H. Leslie, Pennsylvania.
Falero, Juan, Cuba.	McClure, Harry C., Pennsylvania.
Gauger, Horace, Pennsylvania.	Place, Benjamin F., Pennsylvania.
Guiteras, Justo O., Cuba.	Reinecke, Herman L., Pennsylvania.
Harlan, Justin E., Pennsylvania.	Rhein, Meyer L. (M.D.), New York.
Hawes, Earl P., Rhode Island.	Riedel, Henry, Brazil.
Howard, Charles T., New York.	Saunders, Boyd G., New York.
Johnston, Will A., Illinois.	Sinclair, Thomas D., Pennsylvania.
Justiniani, J. Domingo, Cuba.	Smith, Victor M., New York.
Kaas, Carl P. A., Norway.	Southwell, Charles C., Wisconsin.
Ketcham, Theodore V., Connecticut.	Stewart, William W., Pennsylvania.
Kimball, Richard H., Illinois.	Voelkler, Ludwig H., Pennsylvania.
Koser, A. Stewart, Pennsylvania.	Wells, Charles H., Pennsylvania.
Kutz, Albert J., Pennsylvania.	Wendel, William C., Wisconsin.
Lang, Frank W., Pennsylvania.	Wing, Stephen R., Pennsylvania.
Worrall, George H., Pennsylvania.	

## BALTIMORE COLLEGE OF DENTAL SURGERY.

THE Forty-first Annual Commencement of the Baltimore College of Dental Surgery was held on the 2d of March at the Baltimore Academy of Music. The following is a list of the graduates :

Samuel B. Adair, Georgia.	Myron A. Carman, New York.
Roderick Ashton Barrick, Maryland.	Leonard T. Caughy, Maryland.
Ellis B. Bliss, District of Columbia.	Thomas E. Craddock, Virginia.
Ludwig Brandt, Germany.	Robert Byron Cummins, Pennsylvania.
Benijah S. Byrnes, Mississippi.	Edward R. De Normandie, Pennsylvania.
James Valentine Calver, District of Columbia.	Benjamin Hale Douglass, Massachusetts.
George White Carman, New Jersey.	Byrd Page Dunnivant, Virginia.

Frank O. Eilenberger, Illinois.	H. Spencer Pitts, Virginia.
Charles Marshall Emmart, Maryland.	Edgar R. Rust, Virginia.
Benjamin Flannigain, Maryland.	P. Henry Salles, Louisiana.
William G. Foster, Maryland.	Frank Morris Seebold, Pennsylvania.
Theodorick Thomas Frazier, North Carolina.	James J. Seigler, South Carolina.
Laurence De Lancy Gorgas, Maryland.	Damian Silva, Cuba.
James H. Grant, Texas.	B. Holly Smith, jr., Maryland.
Charles Church Harris, Maryland.	Edward Byron Smith, Pennsylvania.
Howard William Hoopes, Maryland.	Frank Alexander Speck, Tennessee.
James A. Hurdle, North Carolina.	Charles Lowndes Steel, Virginia.
John G. Keller, Georgia.	Robert Wilson Sterling, South Africa.
Daniel O. Knight, District of Columbia.	Caleb Anderson Thompson, Virginia.
Henry D. Kurtz, New York.	Wesley Fletcher Tigner, Georgia.
Frank Adolph Lee, Virginia.	William Townes, jr., Virginia.
Myron M. Maine, Connecticut.	John Charles Wachter, Maryland.
Lemuel Estes Meador, South Carolina.	Effingham Wagner, Alabama.
Frank S. Milbury, New Brunswick.	John Henry Walker, Louisiana.
Robert W. Morgan, Virginia.	William Austin White, New York.
Edgar P. Parsons, West Virginia.	W. Cuttino Wilbur, South Carolina.
	E. Powell Wright, Virginia.

The number of matriculates was ninety-seven.

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## DENTAL POLITICS IN ENGLAND.\*

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BY "A LOOKER-ON."

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### THE DENTISTS' ACT AND ITS CONSEQUENCES.

LONDON, *March 16.*

IN July, 1878, an Act restricting and regulating the practice of dentistry passed our Houses of Parliament amid a great flourish of professional trumpets. Probably most of your readers have heard of the "Dentists' Act." It decreed that no one should be allowed to call himself a dentist or to perform any operation in dental surgery unless he was either (1) a legally-qualified surgeon, or (2) was in possession of a license to practice dentistry from one of the English corporations which were authorized by charter to grant such licenses, or from one of such foreign examining bodies as might be

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\* [We think it right to state that this article is not from the same pen as the London letter we published last month. "A Looker-on" states the true position of the English dentist very clearly, and at the end of his letter refers to the meeting of the Medical Council, which meeting our correspondent of last month dealt with exclusively.—ED. J. D. M.]

recognized for this purpose by the General Medical Council; or (3) unless he had proved by evidence satisfactory to the Registrar of the Council that he was, at the time of the passing of the Act, engaged in the *bona fide* practice of dentistry, "*either separately or in conjunction with the practice of medicine, surgery or pharmacy.*" Legally-qualified surgeons might practice dentistry by virtue of their position on the Medical and Surgical Register, which is kept in accordance with a Medical Act passed ten years previously; but all others, whether holding a dental license or not, were to be allowed to practice only on condition of having their names entered on a Dental Register, which was to be kept by the Registrar of the General Medical Council. The Act was to come into force twelve months later—*i. e.*, on August 1st, 1879.

No sooner was the Act passed than a perfect rush of applicants for the privilege of registration took place; not only all the self-styled dentists who abounded in this country, and who had been the real cause of the passing of the Act, but also hundreds of retail druggists who, in poor neighborhoods especially, are accustomed to hang up a sign in their shop-window with "*Teeth Extracted*" on it, and who were afraid of being deprived of this source of income. And not only druggists, but hosts of their assistants and apprentices—in fact, pretty nearly every man who had ever drawn a tooth, to the number in all of 5,289, or about double the estimate which had been formed by the promoters of the Act of the probable numerical strength of the register—sent in their names and were accepted with little or no questioning, much to the horror of those who were responsible for the passing of the Act.

As soon as they saw how things were going, these latter, who had before been known as the "Dental Reform Committee," reconstituted themselves afresh as the Council of the British Dental Association, and at once set to work to collect subscriptions and evidence, and to obtain legal advice as to the real meaning of some obscurely-worded clauses in their own Act, with the avowed intention of securing the expulsion from the Register of as many as possible of this unwelcome crowd of intruders. The Act, as I have stated, came into force on August 1st, 1869, and the first issue of the Dental Register was published early in October of that year. The Medical Council, by whom the fate of the persons objected to would have to be decided, meet ordinarily but once a year, generally in the spring, but in 1880, for some reason or other—possibly in order to



give the officials of the Dental Association time to complete their preparations—the meeting did not take place till July.

The Registrar of the Medical Council had acted on the supposition that his duties under the Act were "purely ministerial"—viz., to register all those who applied to be registered on the ground of "*bona fide* practice," without inquiring into the truth or falsity of their assertions. It is, indeed, rumored that for some unknown reason he did refuse to register *one* unlucky individual, and that the rejected one actually went before the judges and obtained a *mandamus* or order calling upon the Registrar to register the applicant or to show that he had a legal right to refuse. But before the case came on for argument the gentleman came to the conclusion that he should prefer sheep-farming in Australia to the practice of dentistry in England, and accordingly departed to the Antipodes. One would have thought, therefore, that the first thing the British Dental Association would have done would have been to get an authoritative definition of what constituted "*bona fide* practice." But this is just what the Association did not do. The passing of the Act had only been secured by a series of compromises: active opposition had been silenced by assuring the parties interested—viz., the surgeons, the druggists and the unqualified dentists—that "all existing rights should be respected." The druggists especially, who form a powerful league under the leadership of the Pharmaceutical Society, had been assured of non-interference. If, therefore, it had been decided that mere extraction of teeth did not constitute *bona fide* practice, and if, in consequence, the druggists had been deprived of their claim to registration, they might have accused the leaders of the Association of having violated a solemn pledge. These said leaders, then, found themselves in a difficulty: they were urged on by their own followers to do something toward clearing the Register of the motley crowd who had inscribed their names on it, and yet they scarcely dared, in the recollection of the liberal promises they had so recently given, to take the only step which would lead to a perfectly satisfactory result. Under these circumstances they had recourse to what may be called a very ingenious stratagem. Under what is known as the "Pharmacy Act of 1868" the chemists and druggists are placed under the supervision of the Pharmaceutical Society; a register is kept of all members of the trade, and of these there are two grades—those who are merely retail druggists, and those who have passed an examination in elementary chemistry,

botany and materia medica, and who style themselves *pharmaceutical chemists*. All are subjected to certain restrictions as regards the sale of poisons and other matters. Now, on examining the Dentists' Register, it was found that a number of persons had entered themselves as "engaged in the practice of dentistry with pharmacy" whose names were not to be found in the Chemists' Register, and similarly some had stated that they were engaged in the practice of dentistry with medicine or with surgery whose names were not to be found in the Medical Register. There were, in all, between five and six hundred individuals so situated. The legal counsel employed by the British Dental Association gave it as his opinion that "a person who declared himself to be engaged in the practice of dentistry in conjunction with pharmacy, but whose name was not in the Chemists' and Druggists' Register, was liable to have his name erased from the Dentists' Register," on the ground, apparently, that the declaration being false in one respect (since he could not be legally engaged in the practice of pharmacy), the whole entry was vitiated. He was of the opinion that *bona fides* must be understood before "pharmacy, medicine or surgery," as well as before dentistry. When the Medical Council met in July, 1880, the Secretary of the Association submitted his list and the legal opinion, and demanded that these five hundred and odd names should be removed from the Register. Many of the persons thus threatened applied at the same time for leave to *amend* their entries by the omission of the words "with pharmacy," and this was at first allowed; but finally the Council referred the whole matter to a committee, with instructions to inquire into the facts of the case, and to obtain further legal advice as to the real meaning of the obscure clause.

There had never been the smallest doubt as to what this clause had been *intended* to mean; the doubt was, whether it did not really mean a good deal more than had been intended. It had been foreseen that the Register would be composed of several different classes—viz., the unqualified dentists, who would be described simply as "in practice before July, 1878;" the chemist-dentists, who would be described as "in practice (of dentistry) with pharmacy before July, 1878;" the dental licentiates, who would append the nature and date of their license; and the medical practitioners, who, as was expressly mentioned in another section of the Act, were to be allowed to insert their medical or surgical qualifications. The

columns of the Register would thus show at a glance to which category any individual belonged. But, unfortunately, the draughtsman of the Act had omitted the word *legal*. It was, undoubtedly, the *legal* practice only of medicine, surgery and pharmacy which had been intended to be thus recognized; but the eminent lawyers whom the Dental Committee of the Medical Council consulted gave it as their opinion, that "in conjunction with *the* practice" of medicine, surgery or pharmacy, meant in conjunction with *any sort* of practice, legal or otherwise; and further, that, according to the wording of the Act, the right of an individual to a place in the Register depended solely on the fact whether or not he had been, at the date of the passing of the Act, engaged in the *bona fide* practice of dentistry, and that the other words could only be taken to mean that if the person seeking registration was qualified to be registered, by reason of his being *bona fide* in practice as a dentist, he was to be none the less so entitled because that was not his *exclusive* occupation. And, again, with reference to some who were engaged in various other occupations, as jewelers, hair-dressers, etc., the lawyers say "we think that the name of a person cannot be removed from the Dentists' Register solely on the ground that he carries on some other trade."

A special meeting of the Medical Council was held last month to consider the report of the Committee, to which the above opinions were appended. As might have been expected, the decision was in accordance with the legal opinions—viz., that no cause had been shown for the removal of the names of the individuals objected to from the Register. But this decision involved another difficulty for solution. The irregular practitioners were in the habit of hanging their certificate of registration, framed, in their shop-window, and of announcing that they were "registered and licensed by Act of Parliament to practice dentistry with medicine," or with surgery or pharmacy, as the case might be. Any bone-setter or other quack had thus the means of giving himself what appeared to the public to be a diploma, though, in fact, it was founded only on his own bare word. In order to put a stop to this abuse, the Council decided to omit the reference to medicine, surgery and pharmacy altogether, and to insert in the Register nothing but dental qualifications. This, however, raised a howl from the surgeons. The effect of the decision is, that there will be only two classes on the Register—the qualified dentists, who will have the source and date of their license

appended to their names; and the unqualified dentists, who will appear as in "practice before August 1st, 1879." But as only dental qualifications are to be inserted, the surgeons practicing dentistry cannot register their medical and surgical degrees, and accordingly will have to appear as if unqualified. Of course, they are not bound to have their names on the Dentists' Register at all—the fact that they are legally-qualified surgeons frees them from this necessity; but then they are known to the public as *dentists* and not as *surgeons*, and it is to the Dentists' Register that people will turn to look out their qualifications. So they are very wroth. The general effect of all this is to put the dental licentiate at the top of the tree; and no doubt, for the future, men who wish to take up a good position will acquire the L.D.S. diploma as well as a surgical degree; and this will be a very good thing, since no notice whatever is taken of dental surgery in the examinations for the ordinary surgical degrees.

The decision of the Council has been a great disappointment to many, who hoped to see a wholesale clearance made of all the barbers, hair-dressers and druggists who figure as dentists on the Register; and from excessive glorification they are now rushing to the other extreme, and crying out that the Act was not worth the price paid for it. This is unreasonable; the Act has certainly put a stop to a system of fraud and injustice. Whereas, formerly, any bankrupt tradesman could set up as a dentist, now admission to the profession can only be gained by a proper course of study and the possession of a license to practice. A few years will see a great diminution in the numbers of the present "unqualified" race; they are too numerous to live long, some must inevitably be starved out and will have to betake themselves to some other calling. The British Dental Association is trying to quiet its following by holding out vague hopes of a decision of the "*bona fide* practice" question; but the probability is, that nothing more will be attempted unless some glaring case of fraudulent registration can be met with. Time alone will do all that is needed.

The Act has already given an immense and much-needed impetus to dental education in England. There is, perhaps, just at present rather a tendency to favor book-learning at the expense of practical work; but this will, it is hoped, soon be corrected. Matters are now in a state of transition; they will settle down presently, and then will be the time to criticise our educational curricula and the requirements for examinations.



Meanwhile, it cannot be denied that our Dentists' Act, though hastily prepared and imperfect in some respects, and though it has been the cause of some temporary evil and injustice, has also done a vast amount of good which promises to be permanent. And on the whole, as an outsider, I cannot help thinking that there was more sense in the trumpet-blowing of 1878 than in the wailing and lamenting that are being indulged in just at present.

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### PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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THERE is a great difference of opinion among dentists as to the position that dental surgery is destined to occupy in the future. Some say that it is a sign of feebleness and weakness to ask for the mantle of a time-honored ancestry to cover us—in other words, it is pusillanimous to seek to have dentistry known as a specialty of medicine. Much better, says an eloquent dentist, for the dental profession to claim that we came forth, Adam-like, out of the virgin soil. Dr. Truman W. Brophy is one of the leading champions of the other view of the question, and the *Cosmos* for March publishes a paper that he read recently before the New York Odontological Society, in which he claimed that, in the future, dentistry will be recognized as a specialty of medicine. This paper is an amplification of the views stated in a shorter paper by Dr. Brophy before the American Dental Association at Boston in August last. We are inclined to the view that a great majority of dentists will agree with Dr. Brophy, rather than with those who would have dentistry stand on its own legs. To desire to be independent is a trait of American character; but then, in certain forms of amalgamation or consolidation—to use a word which is now very common because there is so much consolidation going on—there is mutual benefit. But, after all, it is not so much a question as to what individuals would like—whether dentists wish to belong to an exclusive profession or clique, receiving the undivided honors they can get; it is a question as to what is best—what is right. Now, surely dentistry is as much a branch of medicine as dermatology—using the word medicine in a broader sense than to express the physic purchased at the drug store. And so surely as it is a branch of medicine, so surely should it be recognized as such. Dr. Brophy says that the way to secure

dental surgery a position of equality with the other medical specialties is to bring it within the province of the American Medical Association. To do this is the object of Dr. Brophy and his co-workers, and he announces that he will meet all arguments against such a course at the next meeting of the American Dental Association, which will be held in New York in August.

The popular feeling against bleeding is so widespread, and the acquiescence of the medical profession in the feeling is so general, that the discussion on the question in the *Independent Practitioner* is somewhat of a novelty. It was started by Professor Byrd a few months ago, and this month it is continued by Dr. Griswold. Dr. Griswold affirms that the chief reasons why the lancet is out of fashion is because patients are opposed to it. They have been taught to oppose it by a venal press, which "lends or, rather, sells itself to the diffusion of the ways and means of medical quackery in all its protean forms." In other words—quacks have led the papers, the papers the people, and the people the duly-qualified medical men. *Ergo*, quacks have led and are leading medical men by the nose. Dr. Griswold will concede that most folks (including the writer) will congratulate the quacks on this piece of beneficent work they have done, at the same time that they will hate quackery with a bitter hatred.

In the *Dental Jaiirus* Dr. W. H. Robinson pleads for the erection of professional air-castles by young dentists. He points out very plausibly in his reasoning from what has been, that one day a drill will be made which will cut through the most sensitive dentine without hurting. Mallets and pluggers will be made that will not shock; nerve paste that will vitalize, not de-vitalize; fillings that will restore, absolutely, all tissue lost by primary decay, and bid defiance to secondary decay. Forceps will be lost in the water of Lethe, and store teeth will be found only in museums of antiquities to tell what the dentists of 1881 did. Where are these good, these beneficent things to come from? Dr. Robinson argues, that as somewhere and at some time a brain evolved the theory of filling a decayed tooth with metal, and afterward did the work, so brains have already evolved the theory of tissue and life restorers, and the theory will be followed by the practice in the one case as in the other. The dentist who put the first metal plug into a tooth was in his day a radical, visionary theorist. But his visions are to-day realities, and why may we not say that the visions of to-day will be realities of the

future? Probably they will, and probably Dr. W. H. Robinson will have proved himself a prophet.

"Student" writes to the *Dental News* for the purpose of giving some opinions on things in general. Chiefly, however, he raises his voice against some omnivorous kind of critics whom he imagines are ever ready to pounce on any new theory that may be put forward, and tear it to tatters. "Student" is wrong in affirming that good things are always condemned because they are new. There are no people in the world that view new things so favorably as do the Americans. The measure of conservatism which, happily, they do possess is an excellent possession. "Student" lays this down as a proposition: "If you have a theory that is better than one advanced by some one else, then you may criticise him and offer your theory instead of his; but if you can only find fault with the other, and offer no improvement, keep still." This position is one that is entirely wrong. Had it been always observed, the world to-day would be much worse than it is. No one will, I suppose, deny that Carlyle's writings have exerted a great and good influence on the world. But his writings are a long series of fault-finding. He propounded no new theory. He was always criticising current theories, and current practice also. Who shall say that, because his forte was that of wholesale denunciation of what he saw was wrong, that he should have held his peace because he had no well-defined theory to propound? If the foundations of a structure are insecure, is a man not justified in pointing out its insecurity unless he has some new material to offer to build other foundations with?

In the *Missouri Dental Journal* for March Dr. John J. R. Patrick, of Belleville, Ill., reviews his reviewers. It may be remembered that Dr. Patrick sent an article to the meeting of the American Dental Association held at Boston in August, the title of which was "Oral Electricity and the New Departure." In this article the writer denounced all amalgams, arguing that the mercury they contain seriously injures the human system, and he called on every conscientious practitioner to discard all amalgams from their lists of filling materials. Dr. Patrick's theories were assailed by several members of the Association, and, later, Dr. Fletcher attempted to upset Dr. Patrick in the *Dental Advertiser*. To answer these critics our doughty opponent of amalgams takes up his cudgels. My space is too limited to place before my readers the arguments that are used for and against. I cannot admit that Dr. Patrick has proven his

case, although he has so far had the last word ; and, too, he is a little inconsistent. He declaims vigorously against amalgams, asking practitioners to discard them all, and then, in the same breath, says : “ It is not the use of these amalgam compounds that I am combating, but their abuse, and the advocacy of their *exclusive use*.” If words mean anything, the Doctor thinks that a use of amalgams that is not exclusive may be made. Why, then, does he call on “conscientious practitioners” to “discard them all?”

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UNIVERSITY OF PENNSYLVANIA—DENTAL DEPARTMENT.

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THE graduates of the Dental Department of the University of Pennsylvania formed themselves into an Alumni Association at a meeting held in Medical Hall on March 1st. The following officers were elected for the coming year : President, Dr. Chas. T. Howard ; First Vice-President, Dr. Victor M. Smith ; Second Vice-President, Dr. Chas. Southwell ; Third Vice-President, Dr. H. Louis Reinecke ; Corresponding Secretary, Dr. W. A. Johnson, Peoria, Ill. ; Recording Secretary and Treasurer, Dr. S. R. Wing ; Orator, Dr. W. H. Barclay ; Executive Committee—Dr. H. Ganger, Dr. E. P. Hawes, Dr. J. E. Harlan, Dr. G. H. Worrall and Dr. H. C. McClure. The next meeting of this Society will be on the Annual Commencement Day of this department of the University in March, 1882.

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THE DENTAL SOCIETY OF THE STATE OF NEW YORK.

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THE Thirteenth Annual Meeting of the above Society will be held in Albany, commencing on Wednesday, May 11th, 1881, at 10 o'clock A. M. The Board of State Censors will meet Tuesday, May 10th, at 10 o'clock, for the examination of candidates for the degree of “Master of Dental Surgery” (M.D.S.); but no examination will be made during the sessions of the annual meeting of the Society. The sessions of the annual meeting are open to all who choose to attend, and, besides being interesting and important to all desiring to watch the progress and history of dentistry in this State, are instructive and profitable also.

The regular appointments as essayists for the approaching meeting include the following members : N. W. Kingsley, C. E. Francis, J. W. Clowes and G. W. Weld, of New York ; C. A. Marvin, of Brooklyn ; A. M. Holmes, of Morrisville ; S. B. Palmer, of Syracuse ; and A. P. Southwick, of Buffalo. Two prizes are offered to papers of



merit—one the “Whitney Memorial Prize,” which is restricted to the membership of the Society, and another open to the whole profession everywhere. In addition to the reading of papers by members appointed for such duty, the exercises include the reading of the prize essays, voluntary papers, discussions, reports of cases in practice, and the transaction of necessary business.

Hotel accommodations at Albany are usually provided at reduced rates by the Committee of Arrangements, and all possible attention is given to the comfort and convenience of members and visitors in attendance.

S. A. FREEMAN, Secretary.

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### TO CORRESPONDENTS.

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[Under this head we shall be pleased to give our readers an opportunity of obtaining information which their own libraries or experience may not furnish.]

TO ENQUIRER.—A very great deal has been written on caries, and yet opinion is greatly divided in regard to it. We quote the following from Harris' “Dictionary of Medicine and Dental Surgery,” which may be of some help to you : “ . . . If inflammation of the dentine, then, is not the cause of the decay of these organs (the teeth), how is the disease produced? This question can only be answered in one way. It is the result of the action of external chemical agents, and this explanation of the cause is not based upon mere hypothesis. It is supported by facts which cannot be successfully controverted. It is well known that the fluids of the mouth, especially the mucus, when in a vitiated condition, are capable of decomposing the enamel of teeth not possessed of more than ordinary density. The truth of this assertion is demonstrated by the fact that dead teeth and the crowns of human teeth, or those of animals when employed as substitutes for the loss of the natural teeth, are as liable to decay as living teeth, and the decayed part of the one exhibits about the same characteristics that it does in the other. The same is true, too, with regard to all artificial teeth constructed from bone of any sort, or of ivory. . . . Among the direct cause of caries the following may be enumerated : depositions of tartar upon the teeth, a febrile or irritable state of the body, a mercurial diathesis of the general system, artificial teeth improperly inserted or of bad materials, roots of teeth, irregularity in the arrangement of the teeth, too great a pressure of the teeth against each other, and, in short, everything that is productive of irritation to the alveolar and dental membranes or gums.”

## NOTES.

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### DIABOLICAL DENTISTRY.

THERE are some people who seem to imagine that teeth were made to be pulled out, and that the dentist is a stern man whose function it is to relieve suffering humanity from painful teeth by extracting them. There is a grade of humanity so crassly ignorant, so incapable of associating cause and effect, so unable to understand or appreciate the functions of the various organs of the human structure, that they look on all pains and diseases as visitations of God, and are ready to get rid of their teeth as if they were useless excrescences. We are impelled to these remarks on the vulgar disregard of the value of the teeth by the mobility, by a report which reaches us of a man known as the "King of the Dentists," who has been working fearful ravages in the mouths of some of the denizens of the east side of New York. Mounted on a van, he has offered to extract, gratis, the teeth of all comers, and he has had plenty of customers. Some people have considered it fine fun to take time by the forelock and have extracted at once, teeth which may some day ache. Doubtless they have congratulated themselves on having stolen a march on their enemies—their teeth. It seems, however, that a man would be as much justified in going round the country amputating men's legs and arms to save them from rheumatism as is this "King of the Dentists" in performing his diabolical work.

### ARTISTIC DENTISTRY.

THE subject of artistic dentistry is one which, naturally enough, engages the attention of dental societies more to-day than ever. It is true that at no meeting of dentists that we have seen reported has a great amount of enthusiasm for

artistic dentistry been shown, except by one or two speakers who had made it somewhat of a hobby. Not that there is a lack of regard for art by the dentist; on the contrary, thousands of worthy men are striving daily to render artistic both operative and mechanical work. They are dissatisfied with themselves if they turn out anything which would conflict with Nature in her best dress. But somehow, while they are striving after an ideal with their hands, they are not very enthusiastic with their tongues on the subject, and when it is brought up for discussion they have a rather unhappy knack of bounding off on to some other topic. This is very excusable, and it is, too, easily explained. The explanation lies in the fact, that dentistry, as a profession, is comparatively young. What has been found out in regard to the best fillings, the best materials for artificial dentures, and the best method of fitting them, has been found out in recent years. Men have not had time to devote to considering the artistic side of their work. They have had to busy themselves with the more practical side. The text-books of dentistry hitherto published are necessarily unsatisfactory, and the practitioner has to learn more from his own experience than he can from his preceptor or from books. As he becomes confident in his own powers to perform his work well, he will, if he has any ambition, study the artistic side of his work.

### A NEWSPAPER MAN'S TOOTHACHE.

WE have been amused, if not particularly instructed, with the remarks of a correspondent who, when traveling through Nevada, was overtaken with the toothache. He was recommended by a lady to put some

ammonia into the refractory organ. "I would have tried a red-hot poker. I tried the ammonia; I wish I had tried the poker," he says. "A little boy told me a long story of his fortitude and suffering in having a tooth pulled. The story was very amusing and diverted my thoughts to blissful visions of dentists and forceps. The pain grew excruciating, and the train boy suggested a cigar. I paid 25 cents for a San Francisco Chinese-made cigar. It was worse than the toothache. I made up my mind to stop at the first town and hunt a dentist. The only towns worthy of the name between Reno and Ogden, 600 miles, are Winnemucca and Elko. I got off at Elko and went in search of a dentist. None there. 'There was a dentist through here last week,' said a sympathizing resident, 'but he left for Tuscarora. He only makes a trip through here once every three months.' Dull and broken down as the town is, the people of Elko are genial, social and kind-hearted. They regretted the absence of a dentist, but offered to do anything in their power for my relief. One man offered to shoot out the tooth, another to introduce me to the blacksmith, and another to tie a rope around it, hitch a span of horses to the rope, and 'yank out the tooth.' All these kind offers were respectfully declined." Then this correspondent went to Ogden where he found a dentist. "But," he adds, "when I got into his chair the tooth had ceased aching, and I apologized, got on the train and left Ogden for Salt Lake."

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#### "DENTAL AMENITIES."

THERE is on the staff of the *New York Times* a gentleman who does "funny" writing for the journal's editorial columns, and there recently appeared from his pen an article with the above title. According to this individual

the dentist is a man whose function it is "to perpetually inflict grinding torments on one's fellow-beings." The slight obfuscation of vision that the *Times* man possesses as to what dentists do is pardonable. If for no other reason we pardon it because of the rich story he gives us, though it is, in all probability, a wicked concoction of his own imagination. The tale runs thus: A Boston dentist invented a series of straps to hold patients in position. One day there came to him a young Bostonian in company with a Frenchman who could not speak a word of English. The Bostonian said that his companion wanted eleven teeth drawn. The fact was, that these two young men were both suitors for the hand of one young lady. The Boston young man made himself the bosom friend of the Frenchman, and on this particular day suggested that he should have his photograph taken. Instead of taking him to a photographer, the artful Bostonian took him to the dentist. The Frenchman sat down in the chair, had the straps adjusted, thinking that he was about to have his picture taken, when suddenly a pair of forceps emerged from the sleeve of the dentist and a front tooth was out. The indignation of the Frenchman was mistaken for a demand for an anæsthetic; chloroform was given, and ten more were drawn. The sequel was, that the dentist, his chair, windows, etc., were smashed; the Frenchman left the "Hub of the Universe," and the young man who had deceived him married the lady he loved. This is a very simple, pathetic story, but, before the *Times* man writes again on "Dental Amenities," he should learn that Boston dentists do not pull teeth out in such a wholesale, promiscuous fashion, and that the extraction of teeth is not the most important part of a dentist's work.

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*May*, 1881.—No. 89.

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## THE EFFECTS OF CIVILIZATION, FOOD AND CLIMATE ON THE TEETH.\*

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BY DR. THOMAS FRY.

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BEFORE proceeding to investigate the effects of civilization on the teeth, it will be well to consider for a moment the significance of the term civilization. The definition of this compound word, even by the accepted lexicographers, is, to many, very ambiguous, and its exact meaning is variously apprehended by different minds.

Civilization may mean to one man an exalted condition of human life, governed by well-known laws, and acting in conformity with all animated nature ; and to another the accepted empirical condition under which he was born, without regard to any abstract laws governing mind or matter. Civilization means being civilized, refinement, enjoying the state of being refined in manners, cultivated by art and manner, as distinguished from the grossness of savage life.

For our own part, we regard civilization as synonymous with progress—as continued creation, ever forming new combinations, leaving behind, however, well-marked signs, by means of which we may trace and interpret the natural history of our species, just as the geologist reads the transformations of the parts of matter in the natural history of our planet.

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\* Read before the Brooklyn Dental Society.



Let us inquire, then, how and to what extent the refinements of life affect or modify the human organism. That there are effects and modifications produced not only on the organs of man, but also on the organs of all the lower forms of vegetable as well as animal life, will be readily assented to, even by the merest tyro of observers.

If, in our examination of the physiological conditions of organs of different individuals, all of which are the result of the same civilization, we find that each one differs in degree and extent, how shall we determine the points at issue? What are the special points of difference existing in those conditions considered primitive in contradistinction to those of the more complicated and refined state?

In the first we find that man, who is totally dependent upon his own individual efforts to feed himself by the products of the chase, and by inherent personal prowess and persistent force, is enabled to sustain himself among his fellows at all times and under all conditions. The uncertain results of savage life, the constant energy expended in the pursuit thereof, together with an ever-present danger, while fatal to the weak and defective in mind or body, must necessarily strengthen and develop to greater perfection those organs so necessary to animal life in the vigorous and physiologically perfect man. Consequently, from what we can gather from observation, we are led to assume that the primitive man was not subject to a primitive loss of those important organs, which are now the subject of our consideration. Let us see if we can gather any facts from the observations of comparative animal physiologists that may be correlative, and help us to trace the gradual modifications brought about by altered conditions of life. A familiar illustration of the principle of development of organs by use, and their disappearance by lack of use, is afforded us by our highest developed bovine quadruped, namely, the domestic cow.

The human environment of this animal has caused the mammary glands to secrete a fluid a hundred-fold in excess of the normal supply usual in the wild condition of life of this creature, while at the same time the organs of offense and defense—the horns—are, by lack of use or necessity, simply useless, and in many cases entirely absent. The modifications here alluded to are not pathological in character, and do not, other things being equal, affect the health or deteriorate the physical condition of the animal. When, however,

this creature has been forced by man to remain in a confined space without sufficient exercise, and fed on hot slops, sour and fermented food, and otherwise violating the known physiological laws of life, then, indeed, evidences have appeared of general deterioration of the whole bodily form, and one by one individual organs cease their proper functions, the less vital soon losing its characteristic structure and falling away. These same conditions acting on man are found on all points correlative, and thus enable us to watch, day by day, the changes brought about by those violations. My answer, therefore, to the question as to the effects of civilization on human teeth is that there is no evidence to show that there has been any important changes brought about simply by cultivation, refinement or artistic surroundings.

Having failed under this head to find evidence of change in the archetypal form of those important organs that may not fairly be traced to causes operating outside the pale of civilization, are we not obliged to seek under some other head the primal cause of the many abnormal changes that are daily presented to our view?

In considering the question of food and climate, we remark that the specific or particular kind of food used by man does not prove to be so important as may at first appear, providing it contains the necessary elements suited to the building up of the several tissues of which the body is composed. That the human tooth is continually being supplied and kept up to the standard of ease and usefulness by such pabulum as may be brought to it by the blood is fully recognized. Vigorous animal activity and a corresponding energy of all the special as well as general organs of the body seem to produce perfect nutrition from the most diverse variety of substances. Should, however, any element be lacking an undue length of time, important changes would occur from the constant elimination of waste matter from the body, and this deficiency would undoubtedly impair the activity, and perhaps functions, of the organ so stinted of its special constituent elements. We often see this when there is a deficiency of lime salts (one of the essential parts of bone). Even *perfect* food cannot be taken up and become effective in the nutrition of a special organ unless the organ itself is in a fair state of activity by use.

May I here call your attention especially to the individual action of each tooth in supplying itself by use with such elements out of the common supply as may be suited to its structure? Close obser-

vation on this point clearly demonstrates that each tooth has an individuality and inheritance peculiar to itself. The fact is familiar to us all that a certain tooth will often manifest to us by peculiar shapes, formation, spots, and otherwise defective development, as well as by its liability to reappear in successive generations, that certain pathological conditions have, in the past, operated to check the supply of its nutrition. This shows plainly that, notwithstanding the immediate favorable condition of the body, the lost energy had not been resupplied, thus imparting to the organ the power to recover the healthy condition of its fellows. If, on the other hand, organic activity, together with perfect nutrition and assimilation, go on together, all parts will grow in size and strength upon the most diverse variety of substances; and, to sum up, those organs that are not used are not fed, and, consequently, atrophy ensues and they perish.

If we carefully examine the postulate here presented, and do not confound the effects of diseased organs themselves with the matter to be acted upon, it will be readily seen that, although the best general condition may exist favorable to animal life, yet, if special activities are wanting, lack of growth must accrue to special parts.

In this paper I will not dwell upon other great changes that must occur in important organs when suddenly perverted from their proper use, and which, if persisted in for an undue length of time, must surely destroy the individual before it is possible such changes may be brought about as may be termed physiological. The use of the word time here, is, of course, used in the comparative sense, but it is, nevertheless, an important factor in all permanent progressions, as it enables organisms to gradually conform to their altered conditions of life.

As to climate, we find temperature governing, as it were, special forms of the vegetable kingdom, outside of which temperature they do not come to perfection, and are, therefore, unsuitable to sustain the higher forms of animal life; but, however much a barrier climate may be to the vegetable or animal kingdom that may be on the same plane of existence with itself, climate does not, *per se*, show positive influence on the teeth of man. At the poles we find man consuming the fat blubber of animals, and in the torrid zone acidulous fruits, either of which, when harmoniously distributed to special organs under natural conditions, seem to furnish perfect pabulum for growth and strength to all the tissues of the body in all varieties of temperature and in all climates.

Violations of the laws of life is death; and any condition that tends to destroy organized life prematurely is a veritable pseudo-civilization, and must surely disappear in the course of time: and, as foreshadowed by Miranda,

“ \* \* \* Like the baseless fabric of this vision—  
The cloud-capp'd towers, the gorgeous palaces,  
The solemn temples, the great globe itself;  
Yea, and all which it inherits, shall dissolve  
And, like this unsubstantial pageant faded,  
Leave not a rack behind.”

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## A CASE OF ANTRAL DISEASE TREATED THROUGH A LATERAL INCISOR.\*

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BY ISAAC E. DAVENPORT, M.D., M.D.S., WILLIAMSTOWN, MASS.

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ON the 11th of November, 1879, I was consulted by a middle-aged lady in reference to a gradually-growing tumor of the mouth, which had become the cause of many evil forebodings. The patient was in delicate health, not having fully recovered from a nervous prostration which, three years before, had confined her several months in bed. For about three years she had noticed an uncomfortable feeling (not amounting to pain) in the region of the upper jaw, and, eighteen months before the consultation, a painless swelling began to be noticed in the roof of the mouth well to the left of the median line, which gradually increased, with only an uncomfortable feeling of fullness, until it was as large as a walnut.

Some time after this swelling was noticed, another appeared in a similar manner in the left canine fossa, and gradually increased in size, but was smaller than the one in the mouth. The skin and mucous membrane covering the same was healthy. The swellings were quite tense, but yielding under pressure, and there was some tenderness to pressure in the canine fossa, but none in the roof of the mouth, and it was easy to get fluctuation between these two points, thus showing that their contents were fluid and directly communicating, and also that the maxillary sinus was the seat of the trouble. There was no crepitus, as the anterior and palatine walls

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\* Read before the Connecticut Valley Dental Society.



of the antrum had been completely absorbed to an extent corresponding with the size of the tumors.

An examination of the teeth was instituted with the hope of finding the cause of the trouble. The patient could not remember having had any pain or trouble with any of them, excepting a second bicuspid, in which the pulp was exposed and alive. The pulps of the other bicuspid and the molars were alive and the teeth in good condition, but a slight discoloration and an unnatural sensation upon rapping of the left superior incisor showed that its pulp was dead. These symptoms were so slightly marked that they would very likely have been overlooked in an ordinary examination.

The tooth contained a little more than common-sized gold filling, said to have been inserted six or eight years before; yet I was unable to get any history of any trouble with the tooth more than a vague notion that it had given some uneasiness a long time ago.

Judging this lateral to be the primary cause, the pulp canal was opened and the degenerated pulp removed. No perceptible discharge came from beyond the root: so I drilled through it, and a short distance beyond opened the cavity, and immediately evacuated some odorless, purulent-looking fluid, and the tumor disappeared. The pus which first discharged was of yellow color, quite thick, and contained a lighter-colored, curdy-appearing flocculi, which would close the opening, and required the aid of a broach to remove. Then followed a free discharge of a thin, transparent fluid, having a slightly greenish-yellow tinge.

No pain or inconvenience was experienced during the operation, save what was expressed as a "crawling sensation" in the parts after relief of the tension. Carbolic acid was pumped into the cavity and the root closed, and the patient put upon iron and quinine. Next day the tumors were as large as ever, having filled very soon after the root was closed, the discharge having the same appearance as at first.

The case was seen every day or two for about two weeks, and I usually syringed the antrum with water, then injected a diluted solution of carbolic acid, and closed the root canal, which the patient was instructed to open, after an hour or two, to allow of free drainage. The pus, during this time, gradually disappeared, but the mucous discharge continued the same. During the remainder of the treatment the case was usually seen twice a week.

There were times when the tooth was a little tender to pressure,

and pus occasionally appeared for a day or two, and a few times it became fetid, when, fearing necrosis, an injection of diluted aromatic sulphuric acid was used for a time. Diluted tincture of iodine was also tried during the treatment, but all injections were gradually abandoned, as the discharge was always found to increase after their use, and no benefit seemed to follow, especially during the latter part of the treatment. So, at last, nothing was done except to keep the root canal carefully cleansed to prevent irritation and allow of free drainage. The mucous discharge diminished gradually until in March it had become so slight as hardly to be noticed.

About this time an item of interest was noted; the patient contracted a cold, and in the early stage, when the nasal secretion was of the watery character, she noticed that, when the head was bent forward and to the right, there would be a profuse discharge from the left nostril. This was evidently from the antrum, and came through the natural outlet, in the middle meatus; yet, notwithstanding the open outlet, whenever the root was closed for any length of time the parts became engorged as at first. Attempts to close the root had been made a number of times as the secretion became less, with a similar result. As the discharge diminished, foreign substances collected in the cavity of the tooth, and decay became rapid, and it was thought that something must be done to arrest it. A tube of thin platinum was inserted into the root canal extending from the apex to the opening in the palatine surface of the tooth, the outer portion of the canal and the cavity proper being filled with oxy-chloride of zinc, so that now the drainage was effected through the tube in the tooth, while the tooth itself was protected from decay.

This was accomplished April 3d, 1880, four months and twenty-one days after the beginning of treatment. There has been no relapse, and for some time past the patient has kept the tube closed for a week at a time with no unpleasant symptoms. One week ago it was closed by myself, and yesterday (Oct. 20th) the stopping was removed and no secretion had accumulated, so I hope to be able soon to close it permanently.

This case well represents the pathology of antral disease, and is easily understood when we consider the structure of the antrum—a bony cavity, with only a small outlet, and lined by mucous membrane, which, like other mucous membranes, is subject to inflammation; and whether this is caused by cold, extension of inflammation

from the nasal passages or from the pericementum, the results of a typical case are the same, for congestion and inflammation mean thickening of the antral lining, and this closes the outlet. Then follows accumulation of secretions and inflammatory products, which become additional sources of irritation, increasing and keeping up the trouble. Necrosis of the bony wall may follow, or the pressure cause absorption till a fluctuating tumor appears at the point of least resistance. When the bone becomes thin, and before complete absorption, we may get the shelly crepitation upon pressure.

I have given you the history of this case, thinking that, for two reasons especially, it might be of interest: 1st. Because of the rarity of antral inflammation induced by a diseased incisor. 2d. Because of a plan of treatment, entirely unique so far as I know, which saved the tooth as well as relieved the disease of the antrum.

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### MEDICO-DENTAL JURISPRUDENCE.\*

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BY J. H. WARNER, D.D.S., COLUMBUS, O.

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IN the field of Medical Jurisprudence the dental profession must, from the necessities arising from natural causes and the complicated forms of our modern civilization, take and maintain a most important position. Shipwreck on the seas, and accidents of various characters on land, are sending their victims to untimely graves, while crime, with its bloody hand, adds all too frequently to their numbers. In a very large percentage of these cases of untimely death the sure and certain identification of the remains, and thereby the positive proof of the death of the party in question, becomes a matter of paramount importance. In cases of questionable *post-mortem* identity there arises at once the occasion and the necessity for proofs which are incontrovertible. On the solution of this question hang the hopes and fears, the days and sorrows of many a loving heart. On its solution, also, hang the decrees of courts, the entailment of estates, the payment of life insurance, and, in case of crime, perhaps the life and liberty of a supposed criminal. So quickly, in many instances, does the work or causes of death entirely destroy all ordinary means of identification of the subject, that a necessity has arisen for another—a newer and better method than any

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\* Read before the Ohio State Dental Society.

which has yet come into general adoption. And, in cases of natural death, circumstances not infrequently arise that render identification a matter of much importance, but render its accomplishment at the same time extremely difficult. The height of the person, the color of the eyes and hair, and the age, all at best but approximate evidence in any case, and after the lapse of time, when the soft tissues become destroyed, they are all of no certain and positive value as a means of identification.

Fortunately, it so happens that at this point the testimony of the dentist, in many instances, may be of the most convincing character. His work has been among the most enduring structures of the human frame, and, when all else has perished, the teeth stand as an enduring evidence of identification, provided the dentist, as in moral duty bound, has kept a record of his work. The number of operations and their exact location form a combination of proof whose stronghold increases in geometrical proportion to their number. Teeth filled, extracted or inserted artificially speak with an eloquence that must carry absolute conviction to the mind of the dentist whose operations have been made the subject of daily record. The number of changes that may be wrought in a set of thirty-two teeth is so great that figures stand aghast at its expression, though a simple mathematical calculation suffices to solve the problem. The number of combinations that may be wrought upon sixteen figures, which equals the number of teeth on either jaw, is 407,080,132,669,600, and there are just two chances in the above number that any two operations upon a full denture of sixteen teeth will be exactly alike. Having given, then, the exact diagram of the dental operations upon, and the exact condition of any sixteen teeth, there is just one chance in the above number that any other mouth in the world can be found to exactly correspond with it in every particular. This can be simply illustrated by dice, each of which has six sides. With one dice any given number will be thrown, on an average, every sixth time; with two dice, every twelfth time; with three dice, every thirty-sixth time; with four dice, every 144th time; with five dice, every 720th time, and with six dice, every 4,320th time, and so on, the difficulty increasing in geometrical progression with the increasing number involved. From the foregoing propositions it is clear that in any case of *post-mortem* identification the production of a dentist's book and exact correspondence of the diagram registered there, with the denture of



the body in question, would be such positive proof as could not possibly be ignored by any intelligent court. It is like producing the key to a combination lock—the one who can produce it would certainly be adjudged the owner of the lock and all it secures. I recite a few cases to illustrate the foregoing propositions :

In Western Michigan, eight years ago, a banker was murdered and his bank robbed the same night. Some weeks after, a body was found on the shore of Lake Michigan, but in so swollen and distorted a condition that the authorities differed as to the identity of the body. In the meantime the banker's partner was arrested and in jail awaiting trial for the murder. His counsel ingeniously advanced the theory that there had been no murder at all—that the man supposed to be murdered had robbed his own bank and fled the country. Under these circumstances the identification of the remains became a matter of grave importance, and the dentist of the missing man was called to identify the body. He testified to having filled a certain tooth with gold for the supposed murdered man which corresponded with the same tooth which was also filled with gold in the mouth of the found body. But the dentist had kept no record of the case and had to trust entirely to his memory, and adroit counsel succeeded in throwing such a glamour of doubt about his testimony that the jury were constrained to pronounce the identity of the body not proven, and it never was proved, mainly because the dentist failed to keep a record of his operations. All will remember the celebrated Parkman-Webster case, in which the identity of the body was proven because among the calcined bones the venerable dentist, Dr. Keep, of Boston, was able to identify the teeth and a gold plate which he had made for the murdered professor of Boston College.

Years ago, in a Michigan town in which I resided, a young man aged twenty years had his life insured in an "Accident Life Insurance Company" for \$10,000. Shortly after, he was reported drowned by the upsetting of a skiff on the St. Clair River. A month after, a body was found upon the shore corresponding well with the height and size of the insured party, but the soft tissues were, in such an advanced state of decomposition that the parties who knew the missing man well could only testify that they believed the body was his, and the body was buried on the shore where it was found. I had, a few weeks previously, operated for the young man and could have sworn positively whether the body was of the insured party had I been called upon to do so, and on this question

the result of the suit for payment would have mainly hinged. The insurance company, however, had its suspicions aroused, and, while the claimants were clamoring for their money, the supposed dead man was unearthed in the Far West by a detective, and the swindle was exposed. The young man, after the alleged upsetting of the skiff, had swam to a passing vessel, been picked up and taken to Chicago, and then gone West to grow up with the country, leaving his bereaved parents to collect the insurance policy and follow after. In this case the identity of the body found could have been disproved conclusively by an examination of the teeth after all other means had failed, but crime, which is ever blind, had overlooked this fatal defect in their chain of evidence on which they relied to establish their proof of the death of the insured party.

When the fair young Prince Napoleon IV. fell beneath the weapons of barbarians in Zululand, the succession of a throne depended to some extent upon the identification of the remains, and this was established beyond a doubt by his dentist, who had inserted several gold fillings in the front teeth of the gallant but unfortunate successor to the throne and fortunes of the imperial Bonapartes.

The foregoing are but a few of the cases which might be cited, but they are freighted with the weight of useful lessons whose moral is so obvious as not to need elaboration.

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## SOMETHING NEW FOR FILLING THE ROOTS OF DEAD TEETH.

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BY FRANK L. HARRIS, D.D.S.

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ALL who have attempted filling the roots of teeth have experienced more or less difficulty in achieving satisfactory results. The few who boast of perfect operations would be made aware of the mistake they make could they always *see* how imperfectly their work has been done. By request, I made some fillings of soft gold (Abbey's) and tin combined, as an experiment, in 1876, and since that time have used it for the poorer class of my patients.

In using gold and tin as a material for filling the roots of teeth, you have every advantage of the gold, as it is folded on the outside of the tin, while the tin stiffens the strip so that it can be carried nearly, or quite, to the apex of the root. I use the strip very loose, and roll or twist in the fingers to as near the shape and size of the

canal of the root as possible, then carry it up with a fine canal plugger, and finish with a heavier instrument.

We shall all agree that the successful filling of roots is one of the hardest tasks the dentist has to do, owing in many cases to the crooked conditions and the impossibility of seeing into the root. In conversation with a dentist of ability, I asked him his treatment of dead teeth, or what he used to fill the roots with. He said, "Gold." I asked him if he was successful, and, like an honest man, he replied: "Doctor, I have many failures; and I believe the men who claim they can fill all roots successfully do not know of the many failures they make." I do not claim that gold and tin will always succeed perfectly, but they will do more than any other material I have ever been taught to use.

As dentists and as a profession we want more of fellow-feeling. I hope to see the day when dentists will freely consult together as brethren, and talk less of the imperfect operations of those who are doing all they can. This unhappy criticism ought to cease and be buried in the past. We want, and ought to be, a liberal profession in the broadest sense of the word. Then the younger and less experienced members could go to the well-informed and get knowledge without fear of being proclaimed and pronounced ignoramuses. I know of men, who ought to be leaders in our calling, who make it a point to speak ill of every man, even under difficult conditions. To my brethren I say, let us quit finding fault and picking with our excavators for flaws in the work of other dentists, and look well for the many defects in our own efforts. Then the world will believe what we would have them believe—that we not only try to fill teeth, but also try to fill our calling in life.

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### CAPPING EXPOSED PULPS.

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BY DR. M. A. WEBB, MARENGO, ILL.

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A GREAT deal has been said about the operation of capping exposed pulps, which seems very simple, and yet a great many members of the profession are not successful in it. The pulp may be in the first stages of disease or inflammation, and may have extended to the peridental membrane, and from thence to ulceration, and finally to suppuration. But to be successful it must be taken in its first stages of irritation—that is, when it first gives pain to the patient from

outside influences, such as heat and cold, etc. At this stage we may be pretty sure of success, as all that will be essential will be something to prevent irritation from outside influences, which can be accomplished by the application of a non-conductor between the pulp and the filling. After this cap is placed gently, but at the same time thoroughly, into the bottom of the cavity, you can place whichever kind of filling you believe, in your judgment, will be the most suitable to the purpose. But if the tooth has been neglected, so that simple inflammation or even periostitis has set in, then the tooth needs preliminary treatment. For ordinary cases I urge attention to the diet and bowels, and then give local and internal treatment. My treatment is homœopathic, and very successful, although very few of my brethren treat oral diseases in that way. Local treatment for periostitis is the application of aconite rubbed around the seat of the inflammation, and also belladonna sometimes in connection with aconite. I treat internally with belladonna and aconite also, in homœopathic doses, and with common cases I hardly ever have a failure.

After successfully combating and reducing the inflammation, so that the tooth is not sore to bite, nor to light taps with an instrument, the final operation may be proceeded with. Of course it is understood that the cavity must be temporarily filled while this preliminary treatment is in progress—say with gutta-percha—which is non-conducting, easily inserted, and easily removed.

In capping the pulp permanently after removing all diseased dentine possible without encroaching upon the pulp, mix together some pure creosote and white oxide of zinc to a thick paste, having the cavity dry. Then with the spatula introduce this paste to the bottom of the cavity, pressing it home with a piece of spunk and pliers, the spunk at the same time absorbing the excess of creosote. If the tooth is aching, the effect is instantaneous, and the pain does not return. After the introduction of the paste you must place upon it something that will harden sufficiently in a few moments, so that you can introduce your permanent filling. If you use amalgam, a solution of gutta-percha and chloroform will be sufficient, but where you use gold, some quick-setting cement will be necessary to effectually prevent pressure upon the pulp, and this completes the operation. In nine cases out of ten this will be absolutely successful, and thus we can save many of the teeth we now extract. I would ask those who seem unsuccessful in their treatment to try this for once.



## CASE IN OFFICE PRACTICE.

BY DR. G. O. SHAFER, CHAMPAIGN, ILL.

A GENTLEMAN, about fifty years of age, called on me about two months ago to have, as he said, "something done with that tooth," at the same time holding the index finger against a very weak projection of enamel on the right superior central incisor. I examined the root and found it to be a clean, healthy-appearing one. The crown, which had been decaying for years, was entirely gone, with the exception of the enamel on one approximal side, and enough dentine to hold it. I decided to pivot the root, and commenced to drill for the pulp-chamber. I drilled into the root five-eighths of an inch and did not find the slightest perception of a nerve canal, nor did my patient experience a great amount of pain. I put a metal pivoted crown on the stump with os-artificiel, and it is working admirably well. Previous to coming to the office the gentleman had never experienced any pain from the tooth. Who has had a case just like it?

## FIRST DISTRICT DENTAL SOCIETY, NEW YORK.

THE Thirteenth Annual Meeting of the above Society was held on the evening of April 5th at the office of Dr. A. C. Hawes, 18 East Seventeenth street, the President, Dr. J. W. Clowes, in the chair. There was a good attendance of members. Dr. Lawrence Vanderpant, of London, was also present.

The annual reports of the various officers and committees were read and adopted.

## THE CLINIC.

In the absence of Dr. Büdecker, Dr. C. E. LATIMER reported on the clinic, as follows: "The attendance was about the average. Two operations were performed—one by Dr. Richmond, who filled a lower first molar with tin foil. The other operation was by Dr. M. H. Webb, with his electro-magnetic mallet, on Dr. Meigs' right superior second molar, with the pulp devitalized. The operation occupied nearly the whole afternoon. Dr. Webb used two and a half books of gold—one of No. 60 and one and a half of No. 30. The buccal wall only remained, the other walls being gone below the margin of the gum. This was the case referred to at the two

last meetings of the Society. The operation was a very successful one and highly satisfactory.

"Two cases of irregularities were exhibited. One had been very successfully dealt with by Dr. Watkins. The patient was eleven years of age, and had an exceedingly irregular upper jaw. The other case was brought by Dr. C. S. Wardwell for consultation."

At the request of the President, Dr. M. H. WEBB gave a description of the operation he had performed on Dr. Meigs' tooth. He said that gold wire was run into two roots of the tooth—into the palatal root and into one of the buccal roots. It was not screwed in, but a hook was made on one part of the wire, and the hook was made to fit into a depression in the side of the pulp-chamber. When the wire was put in place, the hook was pressed toward the depression, so that, in order for it to come away, it would have to bring with it nearly all the dentine between the depression and the surface of the root. The end of each root was closed with gold foil. The wire was barbed, and, though it did not fit very tightly before that was done, it then required a hand-mallet to put it into position after agate cement had been placed in the root. While the cement was plastic, the wire was driven into place. In order to get the rubber dam on the tooth, he inserted gutta-percha several times previously, and pressed the gum up a good deal. The fracture extended three-sixteenths of an inch above the margin of the gum up alongside the palatal root. A Delos Palmer clamp was placed on the third molar, a Tees clamp on the remaining part of the second molar—the tooth to be built up—and the rubber dam was then stretched over each clamp, and put on to the second bicuspid, the first molar having been lost. The buccal wall was standing, but he (Dr. Webb) cut it down an eighth of an inch and built it up with gold, so that now gold strikes the lower molar. This operation took one hundred and fifty grains, or two and a half books, of cohesive gold, and it was all put in place, and the crown and cusps properly shaped with the electro-magnetic mallet in four hours.

Dr. MEIGS said that, when the operation was commenced, the palatal root was a little sensitive, but any one with a little endurance could, even then, stand the mallet if they only thought they could.

#### THE RETIRING PRESIDENT.

Dr. CLOWES, the retiring President, then reviewed the work of the past year in a bright and humorous address. He contrasted the

present *esprit de corps* which exists among dentists with the unsatisfactory exclusiveness which existed when he was a boy. In those days, he said, the greatest need of the profession was association. In terms which were applauded, the President referred to "an apostle who had been raised up in the profession, a hero, now in the right and now in the wrong, always surging to the front. \* \* \* Large in thought and often incomprehensible in expression, he seeks in depths profound, and on the loftiest heights, to compass the Infinite."

#### ELECTION OF PRESIDENT.

The balloting for President then took place, and Dr. W. H. ATKINSON was elected. On his taking his place as President, later in the evening, Dr. ATKINSON said that if they had elected him, thinking him a Parliamentary and acquainted with the correct ways of avoiding a pronouncement of the truth, they had made a mistake. If, on the other hand, they had elected him, thinking him to be an earnest seeker after the truth for himself and willing to indicate it to his brethren in season and out of season, then he would not be willing to be recorded as second to any man in the profession. He was not a Parliamentary, though knowing something about Parliamentary usage, but he cared little for that when presiding over a body of fellow-workers seeking to elevate themselves by a discovery of the truth. He hoped they would try to forget everything that they would wish to forget when their highest inspiration is upon them, and strive to utilize whatever intelligence an individual may bring to the meetings. If some timid soul should come to them with a mission clothed in language with which they are unused, let them listen and see if there is anything of instruction in it.

#### ELECTION OF OFFICERS.

The election of officers then took place, with the following result: Vice-President, Dr. W. T. La Roche; Secretary, Dr. G. W. Weld; Delegates to the State Society, Drs. C. F. W. Budecker and E. T. Payne; Censors, Drs. A. L. Northrop, W. A. Bronson, E. A. Bogue, F. Abbott and C. A. Woodward.

After the transaction of some other formal business the meeting adjourned.

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WISCONSIN STATE DENTAL SOCIETY—The Eleventh Annual Meeting of this Society will be held in Milwaukee on the third Tuesday in July.

FIFTH DISTRICT DENTAL SOCIETY, NEW YORK  
STATE.

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THE Thirteenth Annual Meeting of the Fifth District Society met in a room in the Butterfield House, Utica, recently. The morning session convened at 11.30, with Dr. E. L. Swartout, of Utica, President, and Dr. H. P. Chambers, of Lowville, as Secretary *pro tem*.

Discussion arose as to the sense of the Convention with reference to the use of new remedies. Dr. MARSHALL, of Syracuse, thought that no patent or secret remedies should be used by any member of the Society unless the formula should accompany the material, and moved a resolution in accordance with that view. He further considered that it was only justice to the patients that nothing should be used that the dentists themselves knew nothing of. After a lively discussion, that was participated in quite freely, the resolution was adopted.

President E. L. SWARTOUT then read his annual address. He referred to the advances which have been shown in the several departments of operative mechanical dentistry and science of the profession. Reference was also made to the advance in study in the true science of dentistry in pathology and therapeutics. He suggested more methodical practice and study in our profession, with notebooks constantly at hand to make memoranda. The Doctor said that each member of the Society should be ready to fully and freely communicate to others equally worthy, for the general good of the profession.

Dr. BENNETT presented a paper on "Dental Hygiene."

Dr. PRIEST spoke of the better practice, which should prevail to a greater extent, of making use of plastic fillings in the preservation of the teeth of children as preparatory to more permanent stoppings in after years. Drs. NELLIS, CURTIS, MARSHALL and others discussed the topic.

Dr. HORSEY read a paper on the use of the file in the prophylactic treatment of caries.

Dr. PALMER gave the Society an interesting essay on "The Ultimate Elements and Chemical Components of the Tooth Bones of the Human Face."

Dr. HOUSE read an essay on "Pathology and Therapeutics." The essayist dwelt at some length upon the various causes that pro-



duced a vitiated condition of the mucous membrane. He divided them into two classes, viz.: mechanical and constitutional. The Doctor gave many cases, one in particular where mechanical means superinduced sarcoma. He also presented many suggestions regarding the treatment of constitutional disturbances, viz.: laxatives, aperients and tonics.

Remarks followed by Drs. MARSHALL and NELLIS. Dr. NELLIS spoke of the necessity of the practitioner being very careful to cleanse instruments after using, to prevent inoculation.

Dr. I. C. CURTIS read an essay on "Histology and Microscopy—Formation of Secondary Dentine." This proved to be one of the most interesting papers of the session. By the aid of the microscope Dr. Curtis gave illustrations showing specimens of the bone, dentine, enamel and secondary dentine. The essay was followed by a general discussion.

Dr. G. W. TRIPP, of Auburn, addressed the Society on "Ups and Downs of Life in the Dental Profession." He began in a rather humorous *rôle*, but urged upon the members of the Society to be harmonious and extend all courtesies possible to each other.

Dr. TRIPP's address was accorded hearty applause upon its conclusion, and a vote of thanks tendered by the Society. The Doctor was then elected an honorary member, and a copy of his address was requested for preservation among the papers of the Society. Dr. Tripp was extended the privilege of the floor during the remainder of the session.

Dr. MARSHALL moved that a committee of six, one from each county, be appointed to procure a list of all the dentists having registered at the County Clerk's office in the Fifth Judicial District, the committee to act with the Corresponding Secretary and report at the next meeting all illegal practitioners. This was carried and the following members appointed: Dr. Marshall, Onondaga; Dr. Horsey, Oneida; Dr. Relyea, Oswego; Dr. Chambers, Lewis; Dr. Smith, Herkimer; Dr. Sargent, Jefferson.

The following officers were then elected for the ensuing year: Dr. C. B. Foster, Utica, President; I. C. Curtis, Fulton, Vice-President; George F. Horsey, Utica, Secretary; A. B. Cowles, Rome, Correspondent; J. C. House, Lowville, Treasurer; Censors—S. B. Palmer, Charles Barnes of Syracuse, and A. N. Priest, Utica. Delegates to State Society—F. D. Nellis, Syracuse, and J. C. House, Lowville.

## ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

## ORDINARY MONTHLY MEETING, MARCH 7TH, 1881.

THOMAS A. ROGERS, Esq., President, in the chair.

The minutes of the preceding meeting were read and confirmed.

Dr. WALKER exhibited models showing what might be done in correcting an irregularity of the dental arch by three weeks' treatment, with daily supervision. The patient, a young lady, was brought to him two years ago; the upper permanent centrals had erupted under the nose, and there were two supernumerary teeth dividing the centrals from the laterals. These were removed, and attempts were made to improve the dental arch by means of wedges, etc.; but the patient, who lived in the country, attended very irregularly, and little good was done. At last he intimated to her friends that he must decline any further treatment of the case unless the patient could come and live near him and would present herself for inspection every morning. These terms being agreed to, he fitted a vulcanite denture with circular bar external to the teeth, resting on the external alveolar ridge; the irregular teeth were attached to this by ligatures which were readjusted daily. A decided improvement was apparent almost immediately, and the case had since progressed most satisfactorily.

Mr. CHAS. MACNAMARA exhibited a patient under his care in the Westminster Hospital, from whom he had removed a portion of the upper jaw for a sarcomatous tumor.

Mrs. M——, aged 51, was admitted into the Westminster Hospital on the 29th of January: her family history is good; there is no evidence of cancer or any other form of hereditary disease. Mrs. M—— has suffered severely from toothache; almost all her teeth have been extracted. About fourteen months ago (without any assignable cause) she noticed that the gum of her right upper jaw became swollen, and from that time up to the date of her admission into the Hospital the affected part of the jaw continued to increase in size. There was very little local pain in the part, but during the past three months she has suffered from excessive neuralgia of the right lower lid and the side of the nose; it was in consequence of the severity of this pain that she applied to the Hospital for relief.

On admission it was found that the patient's right cheek was considerably swollen in consequence of a firm, solid tumor, which occu-

pied the alveolar process of the right superior maxillary bone. The tumor did not extend as far back as the soft palate, nor did it protrude into the nasal or orbital fossæ. Mrs. M—— was clear as to the comparatively rapid increase in the growth of the tumor during the past few months. There was no enlargement of either the parotid or cervical glands.

On the 5th January, the patient having been placed under the influence of chloroform, I made an incision through the upper lip, along the right alæ nasi and across the cheek to the malar bone. With a Hey's saw the alveolar process of the jaw to the right of the symphysis was divided. I sawed through the nasal process of the superior maxilla and malar bone, and completed the separation of the tumor with bone pliers. The wound was plugged with lint, and its edges brought together with silk sutures.

Before undertaking this operation, the first point we had to consider was the nature of the tumor, and how far we were justified in recommending the patient to submit to a proceeding of this kind.

The alveolar process of the upper jaw on the right side was enlarged equally in all directions; this, together with the painless growth of the mass, made me at first suspect that this might be a dentigerous cyst; it was true the patient was fifty years of age before the tumor commenced to grow, but that fact did not exclude the possibility of its depending on an undeveloped tooth. The walls of the tumor did not yield on pressure, there was no evidence of the growth being cystic, but it was of a comparatively small size, so that if it were a dentigerous cyst at that early period of its development it would not be likely to contain sufficient fluid to enable us to detect its presence without puncturing the mass. Dentigerous cysts of the upper jaw commencing when a person is fifty years of age are rarely met with as compared with osteo-sarcomas growing in this locality. For instance, cases of epulis are common, and by far the majority of them commence in the deep layers of the periosteum in connection with the decayed stump of a tooth.

Now what do we understand by an osteo-sarcoma? My belief is that tumors of this kind arise from a morbid growth of the normal elements of the affected tissues, that these elements, in place of orderly and natural development, revert to their embryonic form. We know that the cancelli of the bones are filled with soft tissues called medulla; this medulla of bone and also the deeper layers of the periosteum are largely derived from the cells of temporary car-

tilage. This temporary cartilage again is the outcome of a mass of cells which is as nearly similar in appearance (during early embryonic existence) to the soft portions of the tumor now before us as any two structures can be. My conviction is, that changes have occurred in the medulla of the bone surrounding this tooth, changes due to the presence of the tooth, which has altered the conditions under which the medulla normally exists and performs its function of repairing the natural disintegration of the bone : the healthy surroundings of the medulla having been interfered with, it has been unable to accomplish its purpose in life, and it has reverted to its embryonic condition. The process is somewhat analogous to the changes we see going on in the vegetable world : it requires a botanist to recognize some of the flowering trees and shrubs transported from a northern to a tropical climate : the surroundings of the plant being altered, they assume peculiar characters. And so, unless we study the appearances of the embryonic tissues we cannot, I think, comprehend the characters of tumors such as those we are now considering.

We are compelled, at times, to work on theories of this kind to enable us to arrive at practical results, and it was upon this theory my practice was guided in this particular case. I believe this tumor was simply a perverted growth of the normal elements of the part, but I knew that as the mass increased in size it would soften, and portions of it might then be carried by means of the blood to the lungs or internal organs of the body, and, growing there, destroy the patient. On the other hand, I felt sure, if I could remove the growth before any such changes had occurred, that with the exception of the loss of the bone my patient would suffer, she would run but little risk from the operation. The result demonstrates that my diagnosis was correct, the entire growth has been removed, and we see the sarcoma is limited by healthy osseous tissue, and by a membrane beyond which it has not as yet extended.

The practical lesson I would draw from the circumstances of this case is, if you meet with a patient affected with a tumor of the jaws such as the one now before us, which has perceptibly increased in size within three or four months, and from its position and conformation you have reason to believe it is a sarcoma, it is your duty at once to remove the alveolar process in which it grows. If you are in doubt as to the nature of the growth, it is well to drill into the mass before resorting to excision of a portion of the bone. But



osteo-sarcomas, as they increase in size, usually contain cavities; therefore, the mere presence of fluid in a tumor does not prove it to be of cystic origin. On the other hand, if the tumor you have to deal with has not increased in size for some years, and causes the patient no great uneasiness, by no means interfere with it. I have here the cast of a young gentleman's mouth taken for me by Dr. Walker in October, 1877; you see the position of the morbid growth is not very unlike that of Mrs. M——; but in this latter case the tumor had commenced when the patient was a lad, and it is his belief that for seven years prior to 1877 it had not grown. Since that time I have seen this gentleman from time to time, and satisfied myself that the tumor had not increased in size; it is, in fact, a sarcoma that has undergone ossification: for, if the morbid action which has excited the diseased growth of the affected tissue subsides, the cells of the medulla may resume their normal functions, and ossification of the tumor takes place, under which circumstances we can hardly do better than to leave well alone.

Mr. BUTLIN said he would not enter upon any discussion as to the nature of sarcoma or the place which it should occupy in a classification of morbid growths. But there was one remarkable feature about this particular case which Mr. Macnamara had not referred to, and to which he should venture to direct their attention. On examining the tumor under the microscope, there were found in certain parts a number of small round or oval bodies, not strictly regular in shape: sometimes two or more were fused together: they were homogeneous and highly refractive, contained no nucleus, but were marked on the surface with slight parallel lines concentrically arranged; tests showed that they were composed of calcareous matter. Mr. Butlin only knew of three cases in which they had hitherto been found, and these were all tumors of the *lower* jaw, and all occurred in *young* subjects. It was probable, as Küster had pointed out, that they were in some way connected with the presence of the teeth, but the nature of the connection was very uncertain.

Mr. COLEMAN said that with regard to the diagnosis of such a tumor as this from a dentigerous cyst, which, as Mr. Macnamara had pointed out, was not always very easy, he looked upon the presence or absence of *pain* as a valuable indication. Dentigerous cysts, at all events in the early stages, did not cause pain, while sarcomatous tumors usually gave rise to a good deal. This case reminded him of a patient who applied to him at the Dental Hos-

pital some time since on account of having suffered extreme pain in the upper jaw on the left side. The mouth was closed and had to be opened under chloroform; it was then found that the third upper molar on that side was not erupted. Thinking it was one of those cases of retarded wisdom tooth which are so frequently met with, Mr. Coleman removed the second molar in order to make room for it. As this gave no relief, the unerupted third molar was itself removed, but no improvement followed; then some roots were removed from the upper jaw, but still the pain continued. The patient also was evidently losing flesh, and at last, about three weeks after the first examination, a swelling became apparent in the neighborhood of the extracted molars. He was now admitted into St. Bartholomew's Hospital; the tumor, which proved to be a sarcoma, grew with great rapidity; an operation was not thought advisable, and eventually the patient died, exhausted by pain and purulent discharges. Probably in this case the growth originated somewhere in the neighborhood of the gasserian ganglion, and hence the suffering was unusually severe, but pain was almost always a decided symptom in these cases.

Mr. CHAS. TOMES said that when examining the specimens on the table he had noticed the calcareous bodies spoken of by Mr. Butlin. He had met with them before on at least two occasions in tumors in the mouth, and was not aware of their great rarity. One was a case of great hypertrophy of the gums, and the other was an ordinary fibroid epulis. He was much struck with their exceedingly close resemblance to the bodies called calco-spherites which were produced under various circumstances when salts of lime were precipitated in the presence of organic matter.

What surprised him most in the specimen shown was that, on tracing round the alveola-dental periosteum, it appeared to be quite normal, although surrounded on all sides by the morbid growth of the sarcoma.

The PRESIDENT said the Society was much indebted to Mr. Macnamara for having brought before them this very interesting case. It was scarcely probable that any of those present would care to undertake the treatment of such a case, involving the performance of a somewhat formidable operation for its cure; but all ought to be able to recognize the nature of such diseases when met with, and therefore Mr. Macnamara's remarks and specimens were most instructive. He understood that this had proved to be a "round-

celled " sarcoma ; was it not generally considered that this indicated a stronger tendency to a malignant type than did the " spindle-celled " variety ?

Mr. MACNAMARA replied that with regard to the question of malignancy, he would rather be guided by the history of the case than trust to the microscopic appearances of the tumor. Malignancy depended quite as much upon the rapidity of growth and the position of a tumor as on its histological structure. Rapidity of growth was, especially, a most important element in forming an opinion on this point ; such a growth as that mentioned by Mr. Coleman was malignant, no matter what its structure might be.

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## ENGLISH DENTISTRY.

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IN the February issue of the MISCELLANY we quoted a communication that appeared in the *English Mechanic*, which professed to give some information as to how ill-fitting artificial teeth could be made to fit perfectly with little trouble or cost. The individual who ventured to give our London contemporary this information signed himself " Dent," and, as was to be supposed, his letter has called forth other correspondents into the arena. We need not trouble ourselves, however, with what these more or less wise correspondents say on the subject-matter of " Dent's " letter—though they say very little about that. They strike off at a variety of tangents, and the remarks they make on other points are even more interesting than those which they make on *the* point. We gather, *inter alia*, from one of these letters, that in Great Britain there are dentists who " work piece-work for a bare living " who " have neither skill nor sufficient remuneration to enable them to do their work properly."

In our opinion there are greater crimes committed in this world than doing " piece-work." For example, it is much worse for dentists only to make a " bare living " at their work. This approaches criminality. But we get about as much puzzled over the haranguing on paper of these correspondents as Carlyle did over the mythical writings of Teufelsdröckh. Hear this writer, who signs himself " T. F.," and talks about the " piece-work " and " bare living : " " Practically it amounts to this—A cheap dentist makes poor work and plenty of money." Now, we gathered, from the first quotation we have given, that the men who make poor work—

in other words, who have not "skill to enable them to do their work properly"—only got a "bare living." Which is it? Do they get "plenty of money" or are they poorly remunerated? "T. F." maintains that cheap men turn out their work by the hundred-weight (fancy one hundred and twelve pounds of sets of artificial teeth, amalgam and plastic fillings!). On the other hand, the man who does his work well has to do it himself—he cannot buy the skill of others wholesale. "I have seen sets of teeth costing £40." says "T. F.," "which were no more remunerative to the dentist in proportion than sets costing 40s." This English dentistry is a source of wonderment to us. Whether it is the good dentist or the quack who makes the most money we cannot understand.

Then comes another correspondent, who signs himself "J. H. D.," with the assertion that, in his opinion, "J. F." (a man who criticised the original "Dent") "has evidently never seen a good set of artificial teeth." "J. H. D." gives a graphic description of how the unsuspecting British public are imposed upon. His words are so telling that we give them below. He says: "A., B. or C. wants a set of teeth; he consults the advertising columns of his daily paper and rushes off to Mr. Pullfang, who states that, for a few shillings and in the shortest possible space of time, without the slightest inconvenience to the patient, he will provide the most perfect set of teeth, etc. Mr. Pullfang takes an impression of the mouth in about two minutes, tells the patient to call again so and so, when the teeth will be ready. The patient calls and teeth are stuck in. 'Can't shut your mouth? Oh, I'll soon put that right,' and away goes Mr. P. to the grindstone. Patient pays his money (if he has not paid it before), and thinks what a wonderfully-clever man Mr. Pullfang is. 'So quick, too.' But, after all, Mr. P. is not a dentist; he is only an advertising quack. A dentist would tell you that sets of teeth can't be made in such a hurry, and also that he will require more money for them than a mechanic's wages. He will endeavor to make a set of teeth that will please *you*, and, what is of more importance, he will make one that will please himself, for patients are not always pleased with what is best for them."

American dentists are nowhere more needed than in England, if only to act as missionaries. It is very sad that so rich a community as the English should be subjected to the tender mercies of such Pullfangs as are here described. But are there any such men in the United States?



## SOME SUGGESTIONS FOR DENTAL SOCIETIES.

THE address of Dr. C. T. Stockwell, retiring President of the Connecticut Valley Dental Society, delivered at the last meeting, has been kindly placed in our hands, with leave to publish as much of it as we deem expedient. Although it is chiefly local in its application, and appeals more particularly to the Society before which it was read, there are still some suggestions which are of more than mere local interest. We give herewith some extracts :

"It must be confessed, I think, that we [*i. e.*, the Society] have need of more scientific men. Our Society does not lack in real ability, or for men of talent, but attention has been turned very largely in the past to the mechanical or manipulative departments. When this is the case, the manipulative can but gain at the expense of the scientific. While I would say nothing to in the least undervalue the effort to gain manipulative expertness (for this is one of the comparative essentials to success), it nevertheless appears that the great need of our profession to-day is more men with expert heads as well as expert hands—men whose culture, tastes and abilities qualify them to delve deep into scientific research for facts upon which are based the whole system of causes and effects, and the application of these to the prevention as well as the cure of disease. \* \* \*

"The great class of intelligent people with whom we are brought in contact in our practice demand that we should be something more than skilled mechanics. \* \* \* To those who would keep abreast with the times, a course of hard, persevering, systematic study seems inevitable. A stimulus and aid to this study is, and has been, supplied in the organization and maintenance of this Society. Can it be made more efficient in this direction? Are there any new methods the adoption of which may reasonably be expected to lean to a more satisfactory demonstration of fact in place of so great a percentage of confusing fanciful theorizing?"

Dr. Stockwell then proposes certain reforms in the organic system of the Society, after which he asks the question, "Have we reached our ideal of what a society may be? If so, we are already past the meridian and in the afternoon of our day, and a new day will not break upon us until the ideal shall advance beyond the real, and awaken within us a discontent with present things."

The Doctor recommends the division of the Society into sections

—or, rather, “the adoption of a somewhat modified system of this character.” Also, he suggests that when special scientific subjects arise, a special committee should be appointed, empowered to employ experts on behalf of the Society. He expresses the hope that “the time will come when all the different societies in our land will combine in the joint support of a trained specialist, who thereby shall be enabled to devote his entire time to experimentation and the investigation of those questions which underlie our specialty.”

The last suggestion Dr. Stockwell offers is, that local clubs or associations of dentists be established under the auspices of the Society, “for the discussion of incidents of practice, the reading and digesting of various important articles as they appear in our journals, the exchange of experiences and sifting of theories, the united prosecution of some question to its foundation facts.”

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## THE MEDICAL PROFESSION AND MANUFACTURING PHARMACISTS.

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THERE is an able editorial article on this subject in a recent number of the *Detroit Lancet*, which takes the ground that the manufacturing chemists and pharmacists are important allies and helpers of the physician. They devote themselves to studying and supplying the legitimate wants of the profession. The following extracts from the article will serve to show its drift, and we are confident that every candid reader will admit its justice :

“With the aid of the best practical talent they can procure, they prepare the chemicals and medicinal preparations that the profession desire. By their combination of abundant capital, the best business talent and experts in every department of manufacture, they have been able to render medicinal preparations at once uniform in quality, elegant and convenient in form, and moderate in price. Further, they have been and are ready to spend time and money without stint in the search for new drugs, and in devising new and more desirable forms for their exhibition. We are sure that all who have given the matter sufficient attention to reach the real facts in the case will agree in the statement that the manufacturing pharmacists are the closest allies of the medical profession, and that the interests of the two are in perfect harmony ; that the former are content to be permitted to serve the profession in any manner that the profession may direct in regard to the procuring and preparation of the several articles of the

materia medica. Further, they are on the look-out for any mineral or vegetable substance which may be of interest or value to the physician. \* \* \*

"We are aware that some look with suspicion upon this enterprise in the introduction of new remedies. But it seems to us that it is strictly in the interests of the wide-awake physician. Unable ourselves to obtain a supply of new drugs at prices which admit of their general use, if found good, shall we not accept the services of those who obtain those drugs for us? If any particular firms are dishonest or dishonorable, or incompetent in their attempts to render this service, let the facts be made known. But when in these respects the reputation of these firms is unimpeachable, it seems to us the height of folly to refuse such excellent and efficient aid—aid in what we cannot do ourselves or obtain any one else to do for us. \* \* \* If the new drug possesses positive merit, it takes its place in the recognized materia medica. If it has no such merit, it soon falls into oblivion. In either case the manufacturing pharmacist is profited only as he renders positive service to the physician. For ourselves, we are glad that the profession has such capable assistants. It is only by this aid that we can ever hope to obtain from the vegetable and mineral kingdoms the agents that will best suit us in our efforts to meet every indication offered by the multifarious disorders of the human body.

"As regards the work of any particular firm, it is entirely proper that the profession should watch it with the most scrupulous care, and make it clearly understood that its patronage of that firm, as of all firms, rests upon the capacity of the firm to do its work well, and upon the practical evidence that it constantly exercises this capacity."

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#### THE CONNECTICUT VALLEY DENTAL SOCIETY.

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THE above Society will hold its Semi-annual Meeting at the Mansion House, Greenfield, Mass., June 16th and 17th, opening as usual at 10.30 A. M. the first day. The programme is still incomplete, and as soon as the Executive Committee finish arrangements the members will be notified through the mail. Last year's summer meeting was held at the extreme southern limit of our district, and it was a very successful meeting. All dentists are invited to be present at the forthcoming meeting and contribute to its success.

A. M. Ross, *Secretary.*

## THE SOUTHERN DENTAL ASSOCIATION.

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THE Southern Dental Association will hold its next Annual Session in Ashville, N. C., commencing on the last Tuesday in July. Dr. V. E. Turner, of Raleigh, N. C., President of the Association, and Dr. J. P. Holmes, Corresponding-Secretary, of Macon, Ga., will give any information desired. Every Southern dentist possessed of an ordinary amount of spirit ought to feel it a duty as well as a privilege to be present at this meeting. Ashville is the favorite mountain retreat of the South, and the scenery on the "French Broad" is equal to anything in the country. Let the dentist who is halting between two opinions remember that in "Picturesque America" one number is devoted to a description of this vicinity. Apart from the professional advantages which will attend a visit, let our Southern readers weigh the advantages from a recreative standpoint.

## NEW YORK STATE DENTAL LAW.

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THE following is a copy of an Act introduced into the Senate of the State of New York by Mr. Lynde. It was read twice and referred to a committee on the judiciary, reported favorably from said committee, and referred to the committee of the whole :

Section 1.—Any person who was regularly engaged in the practice of dentistry within this State on the twentieth day of June, eighteen hundred and seventy-nine, and who was entitled to registration as a dentist as provided by the third section of chapter five hundred and forty of the laws of eighteen hundred and seventy-nine, entitled "An Act to regulate the practice of dentistry in the State of New York," but who failed to cause his name to be registered as therein provided, may, within thirty days after the passage of this Act, cause his name, office and post-office address to be registered in the county clerk's office in the manner provided in said third section of said Act, and such registration shall have like force and effect as if made within the time prescribed by said section of said Act.

Section 2.—This Act shall take effect immediately.

The earnest attention of some of the prominent members of the State Society was given to this Act, and by agreement with Senator Lynde the word "regularly" was inserted in the first line—as it appears above. Thus, any one who, after this Act is passed, registers without having been *bona fide* engaged in dentistry at the time of the passing of the old Act will be liable to the charge of perjury.



## OUR ENGLISH LETTER.

BY "A PERIPATETIC DENTIST."\*

ENGLAND, *April.*

A LETTER for JOHNSTONS' DENTAL MISCELLANY? Certainly, with pleasure; a short one. Anything to relieve monotony. The fact is, I am a downright hater of monotony, however it may come, and I am alarmed by seeing this, my great *bête noir*, growing bigger and bigger every day. Machinery and monotony are almost interchangeable terms. It is a blessing that a man does not live forever, or I think this growth of monotony would drive me mad.

A peripatetic dentist I style myself. Does this sound offensive to my readers? Does a man who travels from place to place call up to their minds the dental fiend of by-gone times? Some of us who dislike monotony take up with a little traveling just for the sake of change. There are in England (as I presume there are in the United States) small towns where teeth decay, but where they do not decay rapidly enough, or in sufficient quantity, to warrant a dentist in "locating" himself there, as you would phrase it. Blessings in disguise of dentists visit such benighted places periodically, and that is why there is a demand for such dentists as I am.

Would you be frightened or disgusted to learn that in the local paper I am in the habit of advertising my movements? Sacrifice of dental ethics, do you say? Perhaps it is; perhaps not. It all depends on what your ethics are founded. Supposing I take high ground and say that my mission is the alleviation of suffering? In the places I visit I have no one with whom to compete, and so I do not advertise for the sake of taking the bread from the mouth of a brother dentist. My sole reason for advertising is, that my regular patients may know when I shall visit their town, and that those who desire to consult me for a first time may also know where and when to find me.

I admit that in a town where dentists are plentiful, and where their signs are everywhere ablaze with rays reflected from their highly-polished steel or brass plates, advertising is inexcusable. But is it so in my case?

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\* [Some remarks we made on the advertising question in our February number have called forth responses from one or two of our English friends, and, in compliance with our request, one of them writes this letter.—ED. J. D. M.]

My letter is somewhat rambling, but I offer no apologies. You desired me to write "on the advertising question, if nothing else," and your request has been complied with.

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PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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THE second number of the *Ohio State Journal of Dental Science* brings with it the tidings, which all its readers will regret to hear, that the editor was obliged to prepare it entirely in the sick-room, where he has been confined since the first number was issued. Editorial work is often done under very difficult conditions, but there is nothing more trying than to be forced into it when the mind and body are temporarily unfitted for exertion. But the reading public demands its periodical mental food. It does not take editorial difficulties into account. Editors feel this, and, regardless of consequences, they have to put forth their strength. Many editors have done this before Dr. Watt, but few will have received more genuine sympathy in their affliction than will the veteran editor of the *Journal*.

Dr. Watt is to be congratulated on the quality of the matter he puts before us in this second number. Articles on "Neuralgia: Its Pathology and Etiology," by Dr. S. S. Wilson; "Anæsthesia—Nitrous Oxide," by the Editor; "The Teeth Deteriorated by Disease," by "A Physician," are all fresh and well-written, dealing with practical subjects that are of interest to the working dentist. Then the reports of societies, the editorials and correspondence appear in full force and flavor. For the sake of the profession, no less than for the sake of Dr. Watt, I hope he will soon throw off all remnants of his sickness.

Some of the English dentists are still boiling over with indignation, and others boiling over with gratitude, at the recent decision of the General Medical Council. An indignant one writes to the *British Journal of Dental Science*, using the *nom de plume* of "Diomedes," a very heated epistle under the heading of "Gratitude." (It is a peculiarity of caloric individuals to place above their effusions "gratitude" when they mean "ingratitude.") But, after all, I sympathize somewhat with this gentleman's remarks. He wants to kick out of the profession unceremoniously all "chemists, barbers, etc.," whom

the Council say shall stay in. At the same time, "Diomedé" is unreasonable in supposing that Acts of Parliament can be retrospective in their action as well as prospective. There is a certain amount of decorum which must be observed in all countries in the carrying out of laws, and the dentists of England ought to be thankful that so much has been given them, and not be total unbelievers in the old saying, that half a loaf is better than no bread.

That "correspondent" to whom I have referred before, who writes for the *British Journal of Dental Science* from this country, is at it again. He is fair enough, however, to admit that, "in some subjects, as that of dentistry, undoubtedly the Americans are in many respects ahead of the English." He then proceeds to criticise rather severely some remarks made recently by Dr. Guilford before a society of dentists in Philadelphia. The following is worth quoting from the end of his article: "It is true there are some (dentists in America) who will neither read a magazine nor attend a meeting of their fellow-workers. They say that they have learned all they need to know. Such men are really a pullback in the advance of the profession. Their profound ignorance can, by no possibility, help on to the achievement of supremacy by American dentistry. But they are growing fewer in numbers relatively. The Western, no less than the Eastern, world is moving onward in the direction of more light. The coming generation of dentists will not, perhaps, possess all the cardinal virtues, nor all the skill and honesty in their work, that one might desire, but with the amount of training they are having they cannot fail to be ahead of their predecessors, and not only will they be better practitioners, but they will take care to make the world aware of the fact."

I hope the *Dental Jaiurus* is not offended because the MISCELLANY was made the recipient of a letter from California on the Cogswell College question. It sees "no good reason why any one should go to New York to tell the dentists of the Pacific coast," etc., etc. No; I am sure it is not offended.

The *Dental Headlight* is alive to the fact that people do not want to strain their eyes when reading a dental journal, and it acts accordingly. It publishes, among other interesting items, a short article by Dr. W. F. Fowler on how to secure "a higher standard of dentistry." Dr. Fowler seems to have struck an idea. The way to secure this, he says, is to insist on the student having a higher literary education. He "should have at least a good English edu-

cation, with a smattering knowledge of Latin and Greek, that he may," etc., etc. Now, Dr. Fowler, that idea is a tame one. Why, a man who can conjugate *amo*, and who can give the derivation of the word "metropolis," has a "smattering knowledge of Latin and Greek!" A "smattering knowledge" is not enough. More than this is wanted—more than mere literary education. Mental and moral culture will do much to raise the standard of dentists.

The *Odontographic Journal* is full of interest, and presents a neat appearance. Will it take a suggestion? It has the habit, when indicating from what source its selected articles come, to state baldly (for example), "Oswald in *Popular Science Monthly*." It would look so much better to put the initials of the writer of the selected articles, besides being, in some cases, a convenience to the readers.

This month I am fairly embarrassed with riches. Articles from original sources, of more than ordinary value, are in all the magazines, and they press themselves on me for a word. The *American Journal of Dental Science* is actually showing signs of vigor in its old age. Dr. Charles L. Steel has an article on "Pivot Teeth," which contains some suggestions that will be appreciated, especially by practical students. Under the title of "Our Dental Literature," Professor L. A. Faught's remarks before the Odontological Society of Pennsylvania are given. He deals with his subject from the standpoint of the critic. He thinks "that the chaff exceeds the wheat, while with writers the echoes exceed the voices." What a sad plight for the dental profession to be in! The Professor would stop "heterogeneous writing on anything and nothing, and, as a first principle, resolve to publish no paper or remark unless it be the result of observation and experimentation, and is thought to contain a newly-discovered fact worthy of record." Professor Faught would never make a good editor.

The *Dental Register* presents a cheerful interior. Its editor opens in an article on "Tooth Structure." An article by Dr. Wm. Erb, delivered at the University of Leipsic, translated by Mme. A. Fulgraff, deals with the newer development of the pathology of the nerves.

A Western dental journal published in its April number the articles by Dr. W. H. Robinson and the editor of the MISCELLANY which appeared in the MISCELLANY for March, on the subject of writing for dental journals. In its reprint of the remarks made by the editor, the journal in question went out of its way to turn a



grammatical into an ungrammatical phrase by the alteration of one letter. The phrase as written for this journal ran thus: "He advertised *considerably* by means of handbills and in newspapers, and was successful." The phrase as copied by the Western journal read: "He advertised *considerable* by means of handbills and in newspapers, and was successful." It is the substitution of the word "considerable" for "considerably" that I complain of. Perhaps it was a printer's blunder, some one may say. I think not, for the misuse of the word "considerable" in such a connection is very common in this country, and, I regret to say, it is often thus misused in some dental journals. Let it be remembered that "considerable" is an adjective, and cannot qualify the verb "advertise." "Considerably," which is an adverb, must be used. Perhaps it may be said, that the Western journal did not use "considerable" as an adverb, but in place of the phrase "a good deal," thus: "He advertised considerable" instead of "He advertised a good deal." But an adjective cannot be made to do duty for the phrase "a good deal," which phrase is made up of an article, an adjective and a substantive. In certain cases the phrase "a considerable amount" may stand for "a good deal," but "considerable" never can. The editor of the MISCELLANY intended the word to qualify the verb, and whoever copied his remarks should have maintained the grammatical construction of his phrase.

To those who may think that these remarks are out of place, seeing that the MISCELLANY is not a grammar, I would say that in my opinion they are very much in place. Men of education (as most dentists are supposed to be) come upon an ungrammatical phrase in their magazines with as much annoyance as one comes on a stone that is grinding under his teeth. To all my neighbors I would say (adapting a phrase which has become popular), "Write English, pray;" feeling that the advice is, in some cases at least, very much needed.

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DENTISTRY'S DISCOVERIES.—Dentistry has given much, but borrowed little. Its discoveries were made within its own ranks. It has created a literature, founded and sustained colleges; \* \* \* made and applied its own pharmacopœia: \* \* \* produced wondrous combinations of metals, chemicals and minerals; harnessed water, steam and electricity to do its bidding, and provided the most cunningly-adapted devices for the more perfect accomplishment of its ends.—*Dr. D. D. Smith, Philadelphia.*

UNIVERSITY OF MICHIGAN (DENTAL SURGERY).

THE Sixth Commencement of the Dental College of the University of Michigan was held in the hall of the University on March 23d. The annual address was delivered by Dr. F. H. Rehwinkel, of Chillicothe, O. Upon the following-named persons, the degree of Doctor of Dental Surgery was conferred by the President of the University, Dr. Henry S. Frieze :

Wilbert George Bean, Detroit, Mich.	Stephen Humbert Gerow, St. Johns.
Henry Franklin Billmeyer, Brooklyn, Mich.	N. B.
Albert Victor Bills, Oakland, Cal.	William Milo Hunt, Columbus, O.
Ephraim David Brower, Ackley, Ia.	Augustus Niel Johnson, Newaygo, Mich.
Joseph Burgei, Herzburg, Bavaria.	Edward Lincoln Kellogg, Atchison, Kan.
Solon Orville Burrington, Milwaukee, Wis.	Jennie Catherine Kollock, Chicago, Ill.
Charles Robert Calkins, Perry, N. Y.	John James Little, Keepville, Pa.
George Henry Corey, Bristolville, O.	Charles Maclean, Ann Arbor, Mich.
Henry C. Corns, Detroit, Mich.	Guy Hamilton Morgan, West Bridge-water, Pa.
Lewis Craine, Erie City, Pa.	Denton E. Peterson, Waterloo, N. Y.
Hiram DePuy, Pittsburg, Pa.	Charles J. Siddall, Oberlin, O.
Albert Vaughn Elliott, Washington, D. C.	Charles Alfred B. Sipe, Galion, O.
Almos Elias Emminger, Germantown, O.	John Silvus Tucker, El Paso, Ill.
Fred N. Emrick, Germantown, O.	Joseph William Wassall, Mineral Point, Wis.
Orion Jonathan Fay, Flat Rock, Mich.	ward L. West, West Fairlee, Vt.
B. Clark Williams, New Philadelphia, O.	

THE PROGRESS OF DENTISTRY.—Dr. D. D. Smith (Philadelphia) writes : When we contrast the condition of our profession to-day with that existing prior to the establishment of the first dental college in Baltimore in 1839, we can but feel that the seeming evil of separation from the mother science (that of medicine) has been over-ruled for good to suffering humanity and to the credit of general medicine as well.

DENTAL AND ORAL SURGERY.—There is, undoubtedly, but one way by which dental and oral surgery can be placed in the position of equality with the other recognized medical specialties, and that is by bringing it within the province of the American Medical Association, made up of men representing every specialty of the science of medicine except one.—*Dr. T. W. Brophy.*

## ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE following were among the questions given at the late examination for the license in dental surgery :

*Dental Anatomy* (two questions to be answered and not more).

1. Mention the three different modes of attachment of the teeth to the jaws found in the animal kingdom, and give an example of each.

2. What is the difference in the form of the lower jaw in an infant at birth, a child of twelve years of age, an adult, and an edentulous patient over sixty, and how is the difference produced.

3. Mention the structures from which the enamel, dentine and cement are respectively developed, and how these formations take place.

*Dental Surgery and Pathology* (two questions to be answered and not more).

1. What is an epulis, where is it generally found, and to what class of new growths does it belong? What are its distinctive characters and microscopical appearances?

2. What would you consider the essential points in order that the operation of stopping a tooth should be successful, and how would the consideration of these points influence you in stopping a very fragile, a very tender or a very conspicuous tooth?

3. What are the relative advantages of gold and vulcanite in artificial dentures, and in what circumstances should the one or the other be preferred?

## TO CORRESPONDENTS.

[Under this head we shall be pleased to give our readers an opportunity of obtaining information which their own libraries or experience may not furnish.]

NEMO.—We are grateful for the suggestion, but it has been somewhat anticipated by another arrangement.

Y.—The following may be what you want: "The upper jaw is composed of two bones, which are united on the median line of the face. They occupy the anterior upper part of the face, are of very irregular form, and each consists of a body, processes and foramina. The body is the central part of the bone, and has four surfaces—namely, the anterior or facial surface, the posterior or zygomatic, the superior or orbital, and the inferior or palatine surface."

SARTOR.—Please send your name and address.

## BOOK NOTICES.

PROCEEDINGS OF THE NEW JERSEY STATE DENTAL SOCIETY FOR THE YEARS 1878, 1879 and 1880. Charles A. Meeker and John C. Hanks, Publication Committee.—This volume of 209 pages appears to be a *verbatim et literatim* report of the meetings of the New Jersey State Society for the past three years. On some of the pages the editor might possibly have used the pruning-knife with some little advantage, or might have, in other ways, exercised his prerogative as editor. However, we are glad to have the reports as they are. The papers read and the discussions cover a very wide field, and even now they possess a freshness which is very appreciable. The cases in office practice given by the members of the Society at their meeting possess more than a local interest, and deserve a wider circulation among the members of the profession than they will get. The Publication Committee are to be congratulated on the appearance of the book, as far as the printer's and binder's work is concerned.

DENTISTRY AND DENTAL EDUCATION AS RELATED TO MEDICINE. By Dr. W. W. Allport, Chicago. Tucker, Newell & Co., Chicago.—“The great North-west, where advanced ideas take root rapidly and expand,” is very productive of ideas on the question of dentistry and its relation to medicine. Dr. W. W. Allport deals with the question in this little pamphlet, advocating “the teaching in our medical colleges of the science of dental and oral surgery, not only that dental students may gain a broader medical education, but that medical students may be better informed regarding the diseases and treatment of the teeth.” The pamphlet is full of wise suggestions such as might be expected from the pen of Dr. Allport.

TRANSACTIONS OF THE OHIO STATE DENTAL SOCIETY. Published by Ransom & Randolph, Toledo, O.—The transactions of the fifteenth annual meeting of the above society comprise more than 70 pages of papers and discussions of considerable interest to the profession.

We have before us the addresses delivered at the annual meetings of the American Academy of Dental Science in the years 1879 and 1880, by Dr. C. A. Marvin and Dr. Josiah Tucker, respectively. The addresses are in pamphlet form, and are full of suggestive ideas.



## NOTES.

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### A WORD ON CRITICISM.

IT is a disputed question whether or not it is right and wise for dentists and physicians to criticise the work of other members of their respective professions. On the one side of the discussion we have men who plead for charity, an absence of the fault-finding spirit and a general handling of the reputations of other men with the softest gloves. Then there are arrayed on the other side estimable men, who say that he who protects another's reputation when he knows the truth to be against him is only pushing the darkness further. The defense of "iniquitous ways," or even the negative kind of defense of not exposing them, is denounced more vigorously by one party to the discussion than charity and forbearance are urged by their opponents. The reason for the greater vigor on the one side is, perhaps, partly to be traced to a greater strength of lungs. After all, this is a question which must be decided by the man rather than by the doctor. It is a broad question of ethics—not dental ethics nor medical ethics. There is a danger of going to extremes in either direction. On the one hand a man may be so conscientiously uncritical—so determined to carry out his principle of not saying a word against the work of his neighbor—that he is one-sided and of little use in any discussion. (It is needless to say there are few men like this.) On the other hand, there is a larger class of extreme men, ever restless, ever saying, with *Iago*, "I am nothing if not critical," ever ready to pick holes in the reputation of their neighbors. But between these two extremes there are men who say nothing against another except it will, in their judgment, further the interests of the community or the

extension of truth. Obviously the proper ground for a man is somewhere near this middle line.

### SCIENCE IN DENTISTRY.

WE publish on another page extracts from a good-tempered, wise and pertinent address delivered by Dr. C. T. Stockwell before the Connecticut Valley Dental Association. There is one point touched on in this paper which we would refer to here, because we feel that it deserves the careful attention of every practitioner in the country. Dr. Stockwell says that the great need to-day in the ranks of the dental profession is expert heads as well as expert hands. He inclines to the opinion, apparently, that too little attention has been given to the manipulative or the mechanical part of the dentist's work at the expense of the scientific. A remark in the same direction was made in the article by Professor Charles Mayr which appeared in the April number of the MISCELLANY. He said on the first page of his article that "many special cases come up every day where one minute of scientific reflection is worth more than years of practical experience unsupported by knowledge." Perhaps this may sound like rank heresy to some people. A "practical" man is regarded by the world as an exceedingly worthy individual. The word "practical" carries with it the idea of experience gained by work. A "theorist" is, on the other hand, regarded as a more or less visionary individual, who adds little to the wealth of the world, but troubles the practical men with his schemes and visions. Knowing all this, there are some who would associate the dentist who has spent his time about the manipulative part of his work with the practical

man, and the man that Dr. Stockwell wants to see more of would be dubbed by them as a theorist. This position is a wrong one to take up. The scientific man is not necessarily a theorist—it is possible that he may be the most practical of men. He is to the worker what chart-makers are to the sailor. All charts are not strictly accurate, and because of this the greater reason exists for further exploration and research. Just so in the scientific world as it affects dentistry. The deductions of all scientific men have not been strictly accurate—some of them have been very wide of the mark—and this fact affords additional reason why more research should be made, so as to find where the firm rock and where the shoals do exist.

#### DIVISION OF WORK.

THERE were some gentlemen at the last meeting of the American Dental Association who expressed disapproval of the system, common nowadays, of one man being in himself a surgical dentist, an operative dentist and a mechanical dentist. They maintained that a man who studies sufficiently to make himself efficient in the surgical and operative departments is unable to find time to devote to the study necessary to make him proficient in mechanical work. In other words, there is so much to learn in each of the three departments of dentistry that a man cannot possibly master them all. There is something to be said for this view of the case. But there are prominent men in the profession who argue in the other direction, maintaining that one mind should control the treatment of a mouth, one atmosphere of opinion should surround the patient—one set of views only, whether the case calls for mechanical, surgical or therapeutical treatment, should be carried out. Two minds, it is urged with force,

—one exclusively mechanical and one exclusively non-mechanical—may clash, for example, as to the proper disposition of a single tooth in a mouth requiring a partial denture. One thinks the case strongly calls for extraction—the other demurs. The operative dentist declares the tooth must be saved. The mechanical dentist whom he has called in asserts that the retention of the tooth would seriously interfere with the success of an artificial denture, and that it must be removed. We merely call attention to the two sides of the question, that our readers may think the matter out for themselves.

#### WRITING FOR DENTAL JOURNALS.

THE interesting article which Dr. W. H. Robinson gave in our March number has attracted some little attention among our dental contemporaries, and some of them—European as well as American—have availed themselves of the opportunity to republish it in their pages. It has been said that you may judge of a man by the company he keeps. Is it not fair to say that you may judge of any nation, or any profession, by its literature? Dental literature is a thing of sudden growth, and it cannot be expected to reach perfection all at once. Its magazines are constantly improving, and the man who cannot see this fact is blind. Their further improvement lies in the hands of the dentists themselves. "Able" editors, however able they may be, cannot do everything, and if they attempt it they will do it indifferently. They can stand at the helm, but they cannot furnish the breeze to fill their sails. It is easy, and at times it does good, for folks to stand aside and criticise the work others are doing for dental journals. But some of the critics are a little stupid. One says, "I admit that repetition of old ideas was once needed, but claim that the day has long passed"—meaning by

old ideas (judging from the context), ideas that had once before been promulgated. This worthy lover of originality says that "journals need only contain that which is new since their last and up to their immediate date of issue." The suggestions contained in these affirmations are not practical. No one desires to see journals publishing this month what they published months ago; but there are some ideas and facts which require to be stated and restated, to be amplified, followed up and expanded. The fault with dentists is that they write too little, and allow interesting experiences to go by without imparting them to any one. Many of these experiences are nothing but illustrations of old ideas and old facts. But if described they will throw fresh light on those old ideas and facts. We do not expect the practical dentist, who has not made science a special study, to write long and elaborate scientific articles. But we do look for more pen-energy on the part of men who only need to exercise their minds and hands a little to give us valuable notes out of their books of daily experience.

#### CORK TEETH.

CARLYLE, in his "Reminiscences," published recently, sketches an old school-master who lived in Annan (Scotland), called "Old Adam Hope." The old man was the regular school-master of Irving, Carlyle's friend, and "incidentally, for a few weeks, once or twice," he acted the pedagogue over Carlyle. Carlyle describes the old man's personal appearance somewhat minutely, and among other things says: "In my time he had a couple of his front teeth quite black, which were very visible, as his mouth usually wore a settled humanly contemptuous grin. \* \* \* The black teeth (*jet-black*, for he chewed tobacco, also to a slight extent; never spitting)

were always mysterious to me, till at length I found they were of cork, the product of Adam's frugal penknife, and could be removed at pleasure." Whether these teeth were set on gold or rubber or celluloid plate, or whether they were pivot teeth, deponent sayeth not. It strikes us they were "stuck in." This little incident speaks volumes as to the practical character of the Scotch, of whom Adam was a representative.

#### A DUTY OF DENTISTS.

IF the soundness of opinion on the question of dentistry that exists in the minds of the general public of different nations could be estimated, there is no doubt that the American nation would display the largest quantity. They realize more than the English, German or French, that the natural teeth are invaluable possessions, and that it is not the sole function of the dentist to tear a patient's organs of mastication from the quivering flesh. But no one knows better than the country dentist how very indifferent even Americans are as to the value of their teeth. No one realizes more than he does that if the dentist would do his duty he has a great task before him of educating the people up to a better appreciation of their teeth. We cannot but rejoice at the many signs that we see of the determination of members of the profession to educate the public in this matter. There is, after all, something to be sought for in life besides the acquirement of a given quantity of dollars. There is far more real satisfaction in the feeling that comes to a man of having imparted some enlightenment to minds that were hitherto dark, than in amassing riches. At the same time it must be remembered that the dentist loses nothing pecuniarily by giving good advice and enlightenment to his patients.

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*June*, 1881.—No. 90.

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## NON-COHESIVE *vs.* COHESIVE GOLD FOIL.\*

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BY THEODORE F. CHUPEIN, D.D.S., PHILADELPHIA, PA.

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\* \* \* Two modes of filling teeth claim the attention of dentists, viz.: the one known as the non-cohesive or wedging principle of securing gold within the cavity of a tooth, the other by the cohesive principle, by which the cohesion of the particles of gold is relied on for its retention in the cavity.

By the former plan the gold foil, by a certain mode of preparation, is rendered entirely free from cohesion, and in this condition it is packed into a cavity of decay in a tooth, formed or shaped for its reception, either in the form of pellets, ribbons, ropes or cylinders, according to the fancy of the operator, or accordingly as either style yields to his manipulation the best results. With non-cohesive gold foil the cavity must have complete circumscribed walls, and, in placing the gold within the cavity, the same relation as to its form must be observed until the last piece is inserted, or, the cavity being loosely filled, the filling is pierced, making at each piercing a new cavity, which in turn is filled, until the filling attains such a degree of density that no more perforations can be made. These are the modes of procedure mostly observed in filling teeth with gold foil, known as "Non-cohesive."

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\* Read before the Southern Dental Association.



With the form of gold known as "Cohesive" not so much reliance has to be observed as to the general form of the cavity, its retention being due to retaining pits and under-cuts, and the filling of the cavity due to the cohesion of each particle to its successor as it is introduced into the cavity.

It has been claimed for non-cohesive foil that it can be adjusted to the walls of a cavity more intimately, that it appears to have more preservative qualities, and that it will more effectually exclude moisture than gold-foil in the cohesive form. I will endeavor to refute these statements, not with any desire of depreciating its utility, which I hold in high esteem, but with the desire of showing that cohesive gold foil possesses all the attributes of non-cohesive foil, is simpler of manipulation, is less trammelled in all cases, and is capable of larger, more useful and greater results.

I.—Being desirous of testing the statement as to whether gold in the cohesive form was less pliable or plastic than non-cohesive gold in its close relation to a cavity, we cut a sheet of No. 6 gold foil in half, and this we folded on itself four times, making sixteen thicknesses, and forming two square disks of the two half sheets of foil. One disk we left as we found it, non-cohesive, the other we made cohesive by heating it red-hot in the flame of a spirit-lamp. Taking the disk of non-cohesive foil, folded as described, we placed it on a dime, the dime being on a table, and, with the ball of the thumb applied to the foil, we brought considerable pressure on the foil against the dime. The result was a clear, clean impression of the coin on the foil. The disk of annealed foil was subjected to the same test, and the result yielded a cleaner, clearer and sharper impression of the coin than was yielded by the other, which was still better borne out by an examination of both by a strong double magnifying lens. To my conviction the test was fair and satisfactory, and settled in my mind that the claim of closer or greater adaptability of non-cohesive gold foil to the walls of a cavity, over cohesive gold foil, was not borne out by fact.

II.—It is stated that non-cohesive gold appears to be more preservative in its results than cohesive gold. We cannot admit this statement, for we have seen failures with both non-cohesive as well as with cohesive foil. It is an established fact that fewer failures occur in fillings inserted on the masticating surfaces of the molars and bicuspid than in localities on the proximate surfaces of these or other teeth, whether the fillings be made of non-cohesive or co-

hesive gold. The cause of this may be assigned to the fact that in crown cavities the approach is direct, the view clear, and the manipulation less trammelled than in other localities; also in the fact that the mucous secretions do not act on these fillings; and, also, that the very act of mastication helps to keep these localities clean. It is true that we frequently find a non-cohesive gold filling preserving a tooth on its proximate face where one in a similar locality of cohesive gold would fail. But this failure of the one must not be attributed to cohesive gold any more than the preservation of the other to non-cohesive gold. If cohesive gold will preserve a tooth in one locality, it can do the same in another, as I hope to show. If it be useful only in certain localities and for certain uses, it is *not* the material for general use, and should be at once stricken from the dental *Materia Medica*. Why, then, is it that we find non-cohesive gold a better preservative in proximal localities than cohesive foil? I will endeavor to show. All the old operators who used only non-cohesive gold foil, as well as those of the present day, inserted their fillings between the teeth by making first wide separations, and so shaping these separations that the teeth would not approach each other after they were once separated. By this preliminary operation they secured ample room for proper manipulation, as well as a clear view and proper approach to these localities. Such a thing as wedging the teeth apart, filling the cavities found on the proximate surface, and permitting these teeth to fall back to their old places after the completion of the operation, was not practiced, and unheard of except in these later days of advanced modern dentistry. I contend that a cavity of decay in the teeth, filled as indicated, whether filled with cohesive or non-cohesive gold, is just as liable to decay again after such fillings are inserted as they did in the first instance before any fillings at all were inserted. The cause of failure in proximate localities, therefore, lies not in the preparation of the gold, but in the common-sense principle of its insertion. Indeed, unless ample room is afforded for the introduction of the filling, the manipulation must be faulty, and, as a sequence, if imperfect, a failure will be the result. The present mode of filling teeth, with a large number of dentists, is on what is known as the "contour plan," by which we understand that, whether the fillings be large or small, the contour or shape of the tooth is restored with the filling material. By the contour plan, room to manipulate is not always gained by filing or

chiseling, but, in cases of slight decay, by pressure or wedging; and, after such fillings are inserted, the teeth are suffered to fall back to their normal positions. This mode of filling teeth was never resorted to by the old operators, who used only non-cohesive gold, or by those using non-cohesive gold at the present time, so that I contend that cohesive foil is subjected to an unfair test in proximate surfaces, and I contend further, that if wide separations are made between the teeth, and cavities between the teeth filled, it will matter but little if the fillings be made of cohesive or non-cohesive gold.

III.—Mr. Fletcher has stated that a cohesive gold foil filling inserted under the most favorable circumstances will not effectually exclude moisture, yet he does not say that this leakage is of such importance as to jeopardize the salvation of the tooth. Many of us have seen non-cohesive gold foil fillings so indifferently inserted, and of so little density, that a needle might easily be pushed through them, and evidently so very leaky that ocular demonstration alone, and not mechanical test, was sufficient to show that moisture permeated as well as surrounded all parts of such fillings. Such fillings we have all seen, and we can bear testimony to their preserving some of the teeth in which they were inserted. Indeed, the journals record cases of such fillings (coming, too, from the hands of eminent practitioners), with testimony of their preserving the teeth in which they were inserted, so that, whether the experiments which were carried out by Mr. Fletcher with regard to the leakage of cohesive gold be true or false (we have never made them, so we cannot vouch for their correctness), it does not seem to matter if a filling be moisture-tight or not to preserve a tooth, whether made of cohesive or non-cohesive gold.

The capacities of non-cohesive gold are few, while those of cohesive are many. With non-cohesive gold the cavity must be as nearly round and cylindrical as possible. A filling of this style of gold demands complete, or nearly complete, circumscribed walls. Irregularity in the form of the cavity must be reduced in shape, and exceedingly minute cavities are almost impossible of proper accomplishment with this style of gold, while contour filling with non-cohesive gold (though the writer has heard that it has been done, yet has never seen it) appears to him an impossibility except in the most simple or favorable cases.

On the other hand, the capacities of cohesive gold are many.

The operator is not trammelled by the extent or the ravages of decay, and cases are to-day accomplished with this style of gold which a few years ago would have been consigned to the tender mercies of the forceps. The want of circumscribed walls, the extent or the minuteness of the cavity are no impediment to its capabilities. However great may be the extent of decay, the last portion of the tooth may be readily restored with cohesive gold. The principle of insertion is entirely mechanical and founded on reasonable philosophical grounds. All the capabilities of non-cohesive gold are found within the capabilities of cohesive gold, and many operations impossible of accomplishment with non-cohesive are within easy range of cohesive. It is believed that out of some ten or twelve thousand dentists in the United States, fully three-fourths of this number, or in that proportion, who use gold at all, use it in the cohesive form in preference to the non-cohesive. Any measure, therefore, in science or art which tends to the simplification of method to easier manipulation, to greater uses or more extended application, must be commended. That it has been received in such favor by the majority, and taught so almost exclusively by all the colleges of the country, seems an indication of the truth of the aphorism, "*Vox populi, vox Dei.*"

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PROPRIETARY, COPYRIGHTED MEDICINES—  
NOSTRUMS.

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THE question of ethical propriety of a drug or a compound of drugs, the manufacture and sale of which is in any manner restricted, has, of late years more particularly, been the subject of considerable professional attention. The question has several sides, but that which shows its influence on the pecuniary interests of the profession is the one which, being the most practical, has been the most conspicuous. True, there is a provision of the Code, coeval with the Code itself, which declares it unprofessional to place any manner of a restriction on anything, medical or surgical, which has in it the possibility of relieving human suffering. But although right and wrong, as abstract principles, know no change or the shadow of a turning, the propriety or impropriety of certain things is conditioned very largely on attendant circumstances. Do the circumstances of to-day justify a practice (that of patenting and copyrighting trade-marks) which thirty years ago was declared wrong? This direct question has been before the American Medical Associa-



tion for a couple of years, and we trust it may at this session be taken up and answered yes or no. The medical journals of the country have, as a rule, answered in the affirmative, and have no hesitancy in lending their pages to the advertisement of medicines and surgical appliances, irrespective of governmental protection. A categorical answer by the Association will relieve many, who receive such advertisements with a sort of mental protest and reservation, of no little embarrassment. If the provisions of the Code on this question are a dead letter, let them be explained; if they are susceptible to such interpretation and modification as will make them consonant with the professional and mercantile rules of to-day, let the Association, in virtue of the authority which is by common consent accorded it, make such *ex cathedra* interpretation or modification. What we want, and what the profession demands, is such a declaration as shall be unequivocal.

How does the practice of copyrighting medicines affect the pecuniary interests of the physician? Undoubtedly it is capable of abuses which affect those interests most disastrously. It has much to commend it, and as long as the sale of medicines thus protected is confined to the profession, the advantage which accrues from a single firm's being made by it directly responsible for the quality of the medicine which goes by an arbitrary name is not offset by concomitant evils. The evil ensues when the medicine is either directly or indirectly advertised to the public. Then it is that the prerogative of the educated physician is usurped by the pharmacist, and the copyrighted preparation finds the level of the most notorious of patent medicines or nostrums. The use of medicines of this class not only entails an enormous unnecessary annual expenditure, and to the detriment of the public health, but it deprives the physician of that support to which he is entitled, both by his education and his having set himself apart for his especial work. The salutary provisions of the copyright is thus, therefore, capable of an abuse which directly affects the physician's income. It remains for the American Medical Association to specifically declare against this abuse, and we do not think it would be going outside the field of its legitimate function for it to appoint a committee which should examine each year any evidence touching on the legitimacy or the illegitimacy of the claims of individual copyrighted preparations to professional recognition. Such a committee would exercise a wholesome influence over manufacturers.—*Virginia Medical Monthly.*

## CASE IN OFFICE PRACTICE.

BY DR. W. D. TENISON.\*

ABOUT four months ago a young man, aged about twenty-two years, called on me with a superior right lateral projecting out of the centre toward the lip, and interfering very much with his comfort. I examined his mouth and found every tooth perfect except this one, which was dead, though not decayed. There was a discharge down at the posterior portion of the root. I found that portion of the socket entirely gone and a foreign deposit on the root, which deposit I removed. I then drilled through to the pulp-chamber and cleaned it out. I treated it for a week or so, but did not seem to make any progress.

At the end of ten days I concluded that something more heroic must be done, and I told him I should like to extract the tooth and find out the cause of the trouble. He consented and I extracted the tooth. I found a calcareous deposit all round the root of the tooth and almost down to the neck, which I removed with a good deal of difficulty, and then filled the nerve-chamber with gutta-percha, cut off a small portion of the end of the root, washed out a clot of blood that was in the socket with warm water, after which I took an instrument and wrapped some cotton round it and passed some chloride of zinc up into that portion of the socket that was diseased to stimulate it to healthy action. I again, after waiting a few moments, washed out the socket with warm water, re-inserted the tooth and tied it down with ligatures into its position. The result is that the young man has since suffered no inconvenience or pain of any sort, neither has there been any swelling. To all appearance the performance is a perfect success. The discharge has ceased entirely and the tooth is nearly as firm as any tooth in his mouth, the gum having grasped the tooth firmly.

It may be added that at the time the operation was performed the patient was under a physician's treatment for inflammatory rheumatism, which it would be supposed would endanger the success of the operation.

A PHENOMENON.—A child was born recently in Alligerville, Ulster county, N. Y., with fully-developed upper and lower sets of teeth.

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\* Reported to the Dental Society of New York, May 11th, 1881.

## FIRST DISTRICT DENTAL SOCIETY, NEW YORK.

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HELD AT THE OFFICE OF DR. W. H. ATKINSON, 49 EAST NINTH STREET, NEW YORK, MAY 3D.

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THE usual Monthly Meeting of the above Society was held at the above address on May 3d, Dr. W. H. Atkinson presiding.

## COMMITTEE ON SUBJECTS.

Dr. J. M. HOWE said that the Committee on Subjects decided at their last meeting to recommend to the Society that the subjects to be discussed at the meeting be printed and sent to each member of the Society and to those who are in the habit of attending the meetings, in order that all interested may have an opportunity to prepare essays or remarks. The subjects for the next seven meetings were suggested as follows :

- I. Chemical erosion, mechanical abrasion.
- II. Causes and prevention of recession of the gums.
- III. Indications for the use of other material than gold in filling teeth.
- IV. Artificial dentures.
- V. The development of teeth.
- VI. Relative resistance to decay of normal and pulpless teeth.
- VII. Prevention and treatment of irregularity of teeth—the first permanent molar.

## THE CLINIC.

Dr. C. F. W. BÖDECKER, reporting on the clinic, said : "We had only one operator—Dr. C. E. LATIMER—who filled a right upper first molar in two places—the mesial and grinding surfaces. The fillings were done with quarter century No. 4 gold and the lead mallet. They were kept separate, though they were very near together. Dr. Latimer could not finish them, as the teeth stood very close together. He advised wedging before finishing the cavity in the mesial surface.

"Dr. ——— presented a case of irregularity ; also a pivot tooth which showed a very good idea. He said that a physician of this city some years ago had broken off one of his lateral teeth, which at that time was restored with gold. Recently the gold came out, bringing a good part of the tooth with it. The Doctor thought it was scarcely advisable to restore it with gold, and decided to re-

place it by a pivot tooth. He thought, however, that as gold had been seen on the tooth for a number of years, some of the patient's friends might notice that he had a false tooth; so he concluded he would try to solder or flow gold on to the pivot tooth. He ground out the face of an ordinary wood pivot tooth and flowed gold solder over it, and it stuck well.

"Dr. WATKINS, of Montclair, also presented a case of irregularity."

Dr. ATKINSON said: "Dr. Hull, of Jamaica, presented a lady with a troublesome condition of the left side of the superior maxilla, she wearing an entire upper set on rubber. He asked me to examine the case. The lady did not like to be publicly examined, and so she came here, when I satisfied her that it was an unerupted tooth that caused the trouble. I removed the tooth. It was a left superior cuspid."

#### CASES IN OFFICE PRACTICE.

Dr. C. E. LATIMER said that a case came into his hands on the previous day. A clergyman living in Greenwich, R. I., came to the city and preached on Sunday. On Monday he was troubled with a swelling in the roof of the mouth. The interesting feature of the case was that the cause of the trouble was so obscure. The teeth seemed to be in very good condition. Finally, the blame was laid to the central incisor, which, by being hit in a certain way, caused the patient slight pain. No response, however, would come except from a slanting blow. The tooth had a gold filling in the proximal surface. He (Dr. Latimer) told his patient that he would drill with a very small drill on the palatal surface of that tooth, and, if it was at all sensitive and was not the cause of the trouble, he would fill the cavity made by the drill free of charge. He did it as an experiment, and not with a certainty of being on the right track. He drilled, and there was no response till he reached the pulp cavity, and then there was a very perceptible response—a discharge of a quantity of very offensive gas and pus. Evidently the gold filling had been put too near the pulp. As much of the pus was removed as possible, and the patient was supplied with a barbed broach to use, and told to go to his dentist on arriving at his home.

Dr. C. F. W. BÜDECKER said he thought it was a dangerous thing to give broaches to patients. They are very delicate, and easily break in a tooth.

Dr. LATIMER remarked that he discriminated between patients



in such matters. He would not give a broach to some patients, but considered he was perfectly justified in doing so in this case.

Dr. G. W. WELD said that, out of courtesy, a dentist had a perfect right to make no charge to a patient, but, from what Dr. Latimer had said, it would seem that he considered a dentist had no right to make a charge for services if his diagnoses chanced to be incorrect.

Dr. LATIMER said that he had a foolish way of wanting to render a fair equivalent for every dollar he received, and he had no objection to other men charging so much an hour for their time, whether they did the patient any good or not, if they liked to do so. But he felt much better, when receiving a dollar from a patient, if he had given a dollar's worth for it. If he had drilled and found that he was drilling into a live tooth, he should have filled the cavity for nothing and searched elsewhere for the trouble. He should not have been able to rest comfortably at night if he had charged his patient for that which did him no good. He did not make his conscience a criterion for other people.

Dr. WELD observed that he did not wish to question the spirit of fairness which Dr. Latimer exhibited. It seemed to him, however, that if a gentleman studies a profession, and some one comes and asks for his opinion, and that opinion is given to the best of the professional man's ability, he is entitled to pay. Were Dr. Latimer's theory entertained generally, it might be said that if a physician treated a person to the best of his ability, and the patient died, the physician was not entitled to pay, or the physician might say, "I don't feel that I have rendered just value for any money, and therefore I will receive none."

Dr. LAWRENCE VANDERPANT asked permission of the President to be permitted to make one or two remarks on the subject introduced by Dr. C. E. Latimer, which was at once accorded him. He said the practice of drilling into the pulp canal was quite a common one some few years ago in London; he had also seen many cases from South America in which this means had been adopted to relieve mischief that existed in the pulp canal. The name of "rhizodonty" had been given to this operation. The meaning of the word he was ignorant of. At one time in Europe arsenic was used by some practitioners wherever the slightest pain or tenderness in a tooth presented itself during excavation of a cavity, and as no treatment or removal of the pulp occurred, suppuration soon followed filling, and rhizodonty was resorted to as a means of relief.

AN INTERESTING EXHIBIT.

The PRESIDENT then handed round some specimens of mechanical work belonging to Dr. Vanderpant.

The exhibit consisted of two large and ponderous vulcanite sets, supported by spiral springs and swivels—a beautiful and finished work of artistic skill, evidencing the large amount of absorption of the alveolus, probably caused by the long-continued use of spiral springs. It had been worn for many years by a distinguished English statesman, deceased.

An upper set of carved hippopotamus ivory, with natural teeth inserted, a type of European work in vogue previous to the introduction of vulcanite, and still adopted by a few Parisian and English practitioners.

An upper metal set, mounted with Ash's tube teeth, with an addition of pink vulcanite gum.

A curious experimental lower set, being a composite of cast tin, vulcanite, and a soft lining made some twenty years ago by the Doctor's pupils in London (England), somewhat similar to the method known as "Reese's."

These specimens of a by-gone age gave rise to much interesting comment, especially the "*bone*" set.

THE COMPARATIVE VALUE OF VARIOUS METHODS OF GOLD PACKING.

This was the subject announced for the evening, and Dr. C. E. LATIMER commenced the discussion. His chief objection to automatic mallets and magneto-electric mallets lay in the fact that they all stop half-way. They will go a certain distance with their blow, but no further. The operator wants the point of his plugger to go till it finds bottom—a firm, solid foundation. They act very much as a shield resting on the teeth would when hand pressure is used, which shield would catch the plugger when it had got a certain distance, and prevent its going any further. The action of these mallets seems very much like patting your hand over a bank of snow and making it all hard outside, but leaving it soft inside. He had experimented with the automatic mallet, and, unless it was watched very carefully, he found that a plugger would reveal a soft filling underneath. When the lead mallet is used and the plugger struck with it, the gold goes till it can go no further because of the firmness of the foundation.

Dr. BÜDECKER said that a few months ago we had a mallet match at the clinic, in which the electro-magnetic stood at the head of all other mallets for weight of the filling. In other words, that mallet packed more gold into a given space than any of the others, although it is not always necessary to have the centre of ordinary fillings perfectly solid. The walls and edges of cavities are the parts upon which the lasting of a filling depends. If they are tight and smooth the filling will not leak. Every mallet has some advantages in certain places. In some cases the electro-magnetic mallet is the best that can be used, as, for instance, where teeth require building up; there it is desirable that the gold should be evenly solid throughout the entire filling. In other cases, hand pressure or some other mallet may be best.

Dr. E. T. PAYNE said he had had large experience in using various kinds of mallets. He was brought up to use soft foil and hand pressure, but afterward used the lead mallet, having a malleter. After that, he used the electric mallet somewhat, after devoting a great deal of time to learning how to use it—say two to three years. He now uses the lead mallet, having a girl sixteen years of age to mallet for him, preferring a girl to a young man, and frequently he finishes plugs with the electric mallet. The electric mallet is not popular with patients. There is, too, a great deal of loose talk among dentists about the electric mallet by men who have had scarcely any experience in its use, and who are thus unqualified to express an opinion on it. He had a case recently which, however, he would have been unable to deal with successfully if he had not had the electric mallet. A gentleman came to him with the central portions of the central incisor broken off, giving a V-shaped hole. They were perfectly smooth, and had been chipping off for some time. A proper lodgment was made for the gold, and the contour was restored with the electric mallet, without which greater difficulty would have been experienced in restoring the teeth. Under such circumstances there is no doubt that the electric mallet is very successful, and it is a very valuable instrument to have at hand. For the last few years, however, he (Dr. Payne) had been inclined to trust to soft foil and pellets and hand pressure for a large portion of the filling of considerable-sized cavities.

Dr. J. B. LITTEG said he had used nearly every mallet that had been made, from the pneumatic mallet that worked with the foot to the magnetic mallet. He preferred the electric mallet to any he

had ever used, especially in contour work, but patients generally seem to object to it. It seems to have a vibration about it which they cannot stand.

Dr. RYNEAR said that he took part in the mallet match that had been referred to. His work was done in half the time that Dr. Webb took with his mallet. He (Dr. Ryneear) always contended that a lead mallet could condense better than one made of any other material, for by it the weight of the blow is carried to the end of the stopping. There is with the lead no recoil. Wherever there is recoil there is a certain amount of force lost. The electric mallet recoils, while with the lead mallet there is less jar, and it is less painful. He used different kinds of mallets in practice, for a patient would tire of one kind, and it is well to relieve the patient, if even the one introduced as a change is really somewhat more painful. Certain mallets do better in certain cases, and it is a mistake to adhere to one style of working, for by that means the advantages of other styles are lost sight of.

Dr. VANDERPANT was very pleased that this subject of mallets came on the *tap's*, as it gave him an opportunity of expressing surprise that so little apparent attention or favor was shown to the Pneumatic, which, in his humble judgment, was worthy of a good deal, especially one of English invention and manufacture—that of a very ingenious dentist, Mr. Kirby, of Bedford. He trusted that, through the courtesy of Messrs. Ash & Sons, he might be enabled to exhibit it, at some future clinic, as well as one or two matters of which it appeared to him, his countrymen possessed the monopoly. As here it was so common for the operator to be surrounded by assistants, he could readily escape the “pedal” labor; in that case it would be a more facile instrument than the Electric, of which he had a very high opinion. He also referred to the automatic mallet (capable of attachment to the dental engine) of Dr. Bonwill. His object in speaking was partly to elicit discussion and opinion on this subject for the benefit of his English friends, who held in such high esteem and respect American ideas on all dental subjects. His concluding remarks were a very warm expression of general thanks for magnanimous courtesy and hospitality bestowed on him since in the country by the dental and medical profession.

Dr. J. M. HOWE remarked that a good deal of stress was often laid on the desirability of solidity of filling, although few fillings



were ever made absolutely solid. It had been recently shown at the mallet match that ordinary hand pressure does not introduce as much gold into a given space by a considerable amount as the method of packing cohesive gold with mallets. They were all aware how much soft gold had done and was doing to prevent decay at the margins of the teeth, and such fillings show that solidity is not absolutely necessary in all cases. They might theorize as much as they desired about each mallet, but after all, other things being equal, the mallet or method of introducing gold should find most favor which will put the gold into absolute contact with the walls. He had used a variety of mallets, and his experience was, that for placing cohesive gold into absolute contact with the walls of the cavity, the electro-magnetic mallet gives more satisfaction than any other. He did not spend two or three years in learning to use it either. He had only one patient who objected to the mallet, and to oblige the patient he (the Doctor) used the automatic mallet on one occasion.

Dr. BÖDECKER said he had met with very few patients who objected to the electric mallet—in fact, most of his patients preferred it. The question as to whether or not the patient objects lay very much in the manner in which the mallet is handled. It should be held in the hand much as a pen would be held, and the point be just allowed to touch the gold.

Dr. LA ROCHE and others complained of the great cost of the electric mallet.

Dr. WELD again referred to the mallet contest of January, 1881. He said that it occurred to him that a test that only showed which mallet could put in the largest amount of gold into a cavity was scarcely a fair one, but it should be a test also as to the manner in which it was inserted. He prepared certain blocks with cavities with perfect accuracy in January, and before each cavity he fixed at about a quarter of an inch distance a brass button, thus causing the cavity in the block to resemble what might be considered in the mouth as a somewhat intricate cavity. Dr. Webb, who used the electric mallet, immediately declined to operate with the brass button before the cavity. He (Dr. Weld) said he would move the button to within an eighth of an inch, and fill the cavity then with soft gold and hand-pressure as well as he could with it a quarter of an inch off. But Dr. Webb refused, saying that he did not care to operate. Dr. Webb also refused to perform the operation with the button half

an inch from the block, and, in order to have a match at all, the button had to be taken away entirely. He (Dr. Weld) filled his cavity with the brass button before it, and so did Dr. Dodge, but the other operators filled theirs with it away, so that they had perfect and free access to the cavity.

The meeting then adjourned.

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## THE DENTAL SOCIETY OF THE STATE OF NEW YORK.

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### FIRST DAY.

THE Thirteenth Annual Meeting of the above Society was held in Geological Hall, State street, Albany, on the 11th and 12th of May.

#### MORNING SESSION, MAY 11TH.

The meeting was called to order at 10 o'clock by President O. E. HILL, of Brooklyn.

Prayer was offered by the Rev. RUFUS W. CLARK, of Albany.

The Secretary (Dr. S. A. FREEMAN) then called the roll and read the minutes of the last annual meeting. Other formal business was also disposed of.

#### PRESIDENT'S ADDRESS.

The following is an abstract of the President's address. After congratulating the members on meeting together in such numbers, and stating that the object was not merely social intercourse, but to seek to aid in the development and perfecting of the science of dentistry, he said :

The first subject of interest I have to refer to is the desirability of members taking a more active interest in this and the district societies. In order that I may bring this more directly before you, allow me to give a very common-place case that embodies sentiments which, I think, I have heard expressed at every annual meeting. Many come here with the desire and intention to take an active part in the proceedings, if only to the extent of asking a question or two, or presenting some case in practice. But, instead of putting your intention into practice, you wait and hesitate, and finally go away without having uttered one word or advanced one idea. You go away with the settled conviction that somebody is to blame for this. But did it ever occur to you to inquire who it is? You have learned something and added something to your store of knowledge, but

the meeting may, after all, have been a failure to you. To such a man I would say that the trained minds you meet at such a meeting have been for years obtaining that which you expect to master in a day. Be not disappointed that you cannot grasp all that is said. Rather wonder that you have been idle so long.

Do what you can to make this meeting instructive ; do and say something, if even what you say is in error ; be not disheartened, but rather rejoice that you have given opportunity to have that one error corrected, and thus learn more truth. When you leave here make a fresh start, firmly resolved that you will become interested in your district society. Do what you can to build it up and make it a power in its district, and it will bring you a rich reward professionally and intellectually. It is full time that you begin to bear the burden, and relieve those who have been in the advance so long. It is you, young men, who need to step to the front and do work and bear the responsibility of your position. You should come here heavily laden with ideas well in hand. It is you who should be rich in thought and eloquent in speech. You should so study and culture yourself as to command respect not only for yourselves, but for your profession. You can accomplish this only with long and persistent labor. This is an age of wonderful progress. All the professions are demanding a closer application, greater efficiency, higher demands, and more real knowledge. See that you are not left behind, and that through you our profession is not dishonored and not disgraced.

The second subject I wish to bring before you is the law which has been passed for the benefit of the young. That law requires certain educational qualifications of all who hereafter practice dentistry in this State. The responsibility of enforcing the law is left to us. I think I cannot say more than that the profession gladly accept the law. Its provisions are liberal enough, and it is sufficiently comprehensive to protect the profession, except, perhaps, in one feature. If the Society takes the initiative in promulgating a plan that will, so far as feasible, avoid all legal jealousy, we shall so far interest the profession that it will be an easy matter to put the law in force, and the fact of doing it will give us an opportunity of placing the profession before the public on a true educational basis. The fact that a man or woman to be a dentist must have studied dentistry, passed an examination, and hold the evidence thereof in the form of a diploma, will be a revolution in the profession and a

revelation to the public. This is a first step toward creating a public opinion that will assist us in our endeavor to place dentistry on a line with the other learned professions. This is our task. We must accomplish it, and let us work continually and conscientiously toward that end. (Applause.)

#### REPORTS.

The reports of the following Committees were presented to the Society and adopted : Annual financial report, annual report of Intercommunication, annual report of Censors, report of Committee on By-Laws, report of Committee on Ethics, report of Committee on Publication, report of Committee on Business, report of Committee on Prize Essays, report of Committee on Dental Laws, report of Committee on District Dental Societies, report of Committee on Dental Practice, report of Committee on Dental Association of United States, report of Committee on Dental and Medical Colleges, report of Committee on International Exhibition, reports of District Dental Societies, report of New York College of Dentistry, and report of Committee on Business (supplemental).

#### THE FALL OF "PRIDE."

Dr. F. FRENCH said that certain expenses had been incurred in a prosecution, which he desired to bring before the Society. In 1879 there was wandering through Steuben county a peripatetic tooth-puller named Pride—the same party mentioned in the Scriptures who went before a fall. This Pride took no dental journal or other dental literature—no daily paper; only a weekly paper. He never heard that there was any such thing as registration till the time when it was too late to register. This Pride wrote to Dr. Freeman, and to the speaker also, when he found out what was his real position in regard to registration, but he was told that nothing could be done. He then took legal advice, and the lawyer, thinking, probably, that there was a prospect of getting some fees, told Pride that he could have the registration reopened. A writ of mandamus was issued, or something to that effect, before the County Clerk. The case came before the Judge at Rochester, but previously Dr. Osgood had written to Dr. Freeman, the Secretary of the State Society, and prepared himself with a lawyer to oppose Pride's demand. The result was that the Judge said the registration could not be reopened, and the application was dismissed. Dr. Osgood expended \$20 in providing a lawyer, besides some \$5 or \$6 expenses of his



own. He (Dr. French) moved that the State Society reimburse Dr. Osgood \$20.

This was seconded and carried unanimously.

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#### AFTERNOON SESSION.

##### INCIDENTS OF OFFICE PRACTICE.

###### ALBANY DENTISTRY.

Dr. E. C. BAXTER, of Albany, called attention to an operation recently performed by an Albany dentist. In attempting to extract a wisdom tooth he at the same time pulled away the second molar and a portion of the jaw-bone. The piece torn away was handed round to the members.

Dr. W. H. ATKINSON, in commenting on this case, urged the abandonment of the use of forceps entirely.

###### TUMORS.

Dr. W. C. BARRETT, of Buffalo, referred to a case which came under his notice recently. The patient had a sarcoma which had been taken before to several dentists, who had said that it was nothing of importance and would soon pass away. But it was really one of a most serious character, but, by being taken in time, it was cured. What lesson could be drawn from this? First, that every dentist should be thoroughly posted and informed in regard to ordinary tumors in the mouth, so that they will be able to distinguish a tumor when they see it. They should be able to detect anything which is really a constitutional disturbance. If they cannot do this, they have no right to express an opinion on cases that come under their notice. Mistakes of this kind are liable to lead to the sacrifice of valuable lives.

Professor FRANK ABBOTT (New York) said that a very interesting case of sarcoma came before him some two years ago. A girl, then fifteen years of age, had lost in the lower jaw all the incisors and the canines, the first and second bicuspid on the right side and the first bicuspid on the left side. A tumor filled all the space formerly occupied by the teeth, and stood up as high as the teeth were originally. It was very malignant in its character. Her mother brought the case, and it was examined carefully and microscopically. It was found to be a round-celled sarcoma of the most malignant type. The case was also examined by an eminent professor in New York, and he agreed with him (the speaker) that the sarcoma must

be removed at once or the life of the patient would be endangered. A few days before the operation of removing the sarcoma was to be performed the patient was taken to a surgeon, who is a little out of the pale of what are called regular men. He told her that he could cure the case without using the knife, and that he had cured several cases of the same kind. The woman was so carried away with the idea of having the tumor cured without the knife that she jumped at the suggestion of the surgeon. Before handing the patient over to him, however, the mother came to the speaker (Dr. Abbott), and told him what she was about to do. He said, "Very well; take your chance. I doubt if anything can be done without using the knife." However, the treatment was tried, and it consisted of injecting the tumor with some fluid which the surgeon said was imported from Paris. The fluid was injected with a hypodermic syringe four or five times in the course of two months. The tumor stopped growing, the teeth which were at the back of it, and which, when the treatment began, were loose, now became tight. It is now about two years since the case was first brought under his (Dr. Abbott's) notice, and the tumor is now only about two-thirds the size it was then, and it is apparently disappearing altogether. The teeth are all firm in their sockets. The success which is attending the treatment is certainly a revelation, and one that was very remarkable. He thought, however, that he knew what the fluid was composed of.

Dr. Barrett in his remarks (continued Dr. ABBOTT) spoke of the case that came under his care as being a sarcoma. It must be remembered that there are several kinds of sarcomas, some of which are very much more malignant than others. A sarcoma or tumor which presents a large amount of connective tissue and a small amount of cells clustered together is not of the most malignant type. The malignant tumors, containing but little connective tissue, develop very rapidly, and, when they get to a certain stage, some internal organ will partake of the disease and the patient will die of it shortly. A tumor may be removed entirely from the jaw, but it is likely to make its appearance elsewhere if it has passed a certain stage. Sarcomas may be divided into three classes—the round-cell, the spindle-cell and the net-cell sarcoma.

Dr. BARRETT said that the terms round, spindle or net cells are simply distinguishing terms of the peculiar manner in which sarcomas manifest themselves. A tumor is a tumor—cancer is a very

indefinite term. Cancer doctors call everything cancers and remove them by a plaster. He had a patient who fell into the hands of such a man, and now she lies in her grave. Tumors are called by various names, but the names have to do simply with the tissue in which they are. The difference between round-cell and spindle-cell sarcomas arises from the amount of pressure under which the cells are developed.

Dr. W. H. ATKINSON remarked that it might seem to be scarcely legitimate for a body of dentists to discuss this question at all. It requires men who are histologists, who understand the development and growth of all the tissues, so as to recognize them under the microscope, to be entitled to any opinion on the matter. There are a great number of medical men who are not sufficiently erudite on this matter to be entitled to pronounce an opinion. What are tumors? Nothing but bunches. A fleshy bunch is the square English of the matter. Dr. Abbott came pretty near giving a definition when he said that when connective tissues predominated it is indicative of non-malignancy. He would urge all present, that when they had cases come under their care which they did not understand, that they call in some one who does understand it, if even by that means they are deprived of a part of the paltry shilling that would come to them. Study histology—if in no other way, study it alone.

#### ELECTION OF OFFICERS.

At the sitting of the second day the officers for the ensuing year were elected as under :

President—Dr. O. E. Hill, of Brooklyn.

Vice-President—Dr. L. S. Straws, of Newburgh.

Secretary—Dr. S. A. Freeman, of Buffalo.

Treasurer—Dr. A. H. Brockway, of Brooklyn.

Corresponding Secretary—Dr. W. H. Atkinson, of New York.

The retiring censors were re-elected.

*(To be continued.)*

A THIRD SET OF TEETH.—The *Albany Argus* says: "Henry Filkins, of Clifton Park, N. Y., a gentleman of some 60 years, is rejoicing over the fact that he has now nearly a full set of teeth for the third time. Mr. Filkins, previous to last summer, had been toothless for some years, but now the teeth are showing themselves one by one.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

ORDINARY MONTHLY MEETING, APRIL 4TH, 1881.

THOMAS A. ROGERS, Esq., President, in the chair.

CASUAL COMMUNICATIONS.

Mr. HENRY SEWILL related the following case of paralysis of the parts supplied by the inferior dental nerve, following the extraction of a wisdom tooth :

A young lady came to him complaining of neuralgia affecting the left side of the face, and which she referred to the lower wisdom tooth on that side. The crown of this tooth was about two-thirds exposed ; there was no caries visible, and it did not appear to be impacted. As, however, the patient persisted in condemning it, and it was evidently useless for the purpose of mastication, Mr. Sewill determined to extract. He accordingly gave gas and then seized the tooth with a pair of thin but strong stump forceps, but was at first quite unable to move it. After using a considerable amount of force, and turning the tooth slowly and deliberately inward and upward, he succeeded in raising it a little, and then, exchanging the stump forceps for a more powerful pair, he succeeded in extracting it. The roots of the tooth, which he exhibited, were large, widely-separated and curved backward, one being deeply-grooved and the other having a foramen through it, as though for the passage of a nerve and artery.

The patient was at once relieved of her pain, but on reaching home she found that she had lost all sensation in the part supplied by the inferior dental nerve : there was complete anæsthesia of the skin of the lower lip as far as the middle line in front, and all the teeth on the left side up to the right central incisor were completely insensitve. Remembering the favorable termination of similar cases which had been brought forward some years ago by Mr. Luther Holden, he had ventured to give an encouraging prognosis. The lady was bearing the inconvenience patiently. He had once before had a case of paralysis of the dental nerve, in which sensation was restored after the lapse of months by the help of galvanism.

The PRESIDENT remarked that bringing such cases before the Society served a very useful purpose. Practitioners might often be unjustly blamed under such circumstances, and might even be prosecuted for malpractice and hardly dealt with, unless it could be



shown by reference to published cases that it was an accident which might occur to any operator, however skillful.

Mr. COLEMAN asked whether Mr. Sewill's patient was much troubled by the saliva running from the mouth? In a similar case which he had brought before the Society some years ago, the patient was much annoyed by the dribbling of saliva; it was not, of course, due to any loss of muscular power in the lip, but simply to the loss of sensation; the patient could not feel it running over, and consequently she was not aware of it until it dropped on her dress. The paralysis in this case lasted for a considerable time, he believed as much as two years; it then got gradually better.

Mr. BROWNE MASON said he had once met with a precisely similar case. The tooth, a lower wisdom, was so obstinate that he was at last obliged to prize it out with an elevator; he then found that the posterior fang was curved sharply backward. Paralysis of the parts supplied by the inferior dental nerve followed, but only lasted about a month.

Mr. CHARLES TOMES said he had noticed the following anatomical facts which might throw some light upon the cause of this paralysis. He had found, by removing the outer alveolar plate of the lower jaw, that when the alveolar process was sufficiently deep the roots of the teeth grew straight, but that when there was not sufficient room they were turned backward as soon as they came in contact with the roof of the inferior dental canal. The fact, then, that the roots were curved showed that their apices had been in close proximity to the nerve, and it was not surprising that this should occasionally be injured in the operation of extraction.

Mr. SEWILL said he was much interested in what Mr. Tomes had stated; he thought it gave a very probable explanation of the cause of the paralysis. His patient had not been troubled with any dribbling of the saliva.

#### SWALLOWING A DENTAL PLATE.

Mr. RYMER exhibited a plate made of dental alloy, measuring two inches across, which had been swallowed by its owner during sleep. The patient went to sleep wearing the plate, was suddenly awakened with a feeling of impending suffocation, and found that the plate had disappeared. His efforts to remove it only made matters worse, and he was therefore taken to the Croydon General Hospital. The house surgeon there being unable to extract the plate, Mr. Henry

Horsley, one of the medical staff, was sent for. The patient now lay in a very exhausted and alarming condition, with great dyspnœa and continually coughing up frothy and bloody mucus. Mr. Horsley, by passing his finger over the tongue, could just feel the edge of the plate; it appeared to be impacted at the lower end of the pharynx, just behind the larynx. Using his left forefinger as a director, the surgeon passed down a pair of curved forceps and managed to seize the edge of the plate and draw it up. The plate, which was shown, had originally carried six or seven teeth, but though these had all been broken away, the patient continued to wear it, not liking to leave it off "for fear he should catch cold in his gums!" It presented several awkward, spider-shaped fastenings, which rendered its removal no easy matter.

#### ANOTHER CASE.

Mr. GADDES showed a plate, sent by Mr. Kekwick, of Carlisle, which had been impacted in the pharynx of a woman for ten hours without producing urgent symptoms. The following notes of the case were supplied by Dr. David Carlyle, who was called to attend the patient :

At six o'clock in the evening of May 15th a messenger informed me that a widow, aged about fifty-five years, had been very poorly all day, but he ascribed the symptoms to her peculiar habits. He was in no way alarmed or anxious as to her state—so little, indeed, that I did not pay my visit for one hour after receiving the call. I saw her then about 7 o'clock in the evening. No person was with her in the house. She was in bed, lying on her right side. She made no complaint, nor were any symptoms of uneasiness or suffering indicated. I could obtain no information from her as to any illness; not in the least did she refer to her mouth or throat. I noticed an alteration in her speech, this being accompanied with a peculiar cluck. It was casually mentioned that her false teeth were lost since the morning; she could give no information as to their whereabouts; during her conversation, no cough, spasm or suffering pointed to their situation. Examination along front of neck gave no information. I then got a tablespoon, the only convenient instrument, bent the handle down to nearly a right angle to draw forward and depress the tongue for examination of pharynx. No foreign body then could be seen there; the effect, however, was beneficial—it induced much straining and vomiting.

After these had subsided I again examined the pharynx with the spoon, and could then see the plate and teeth low in back of pharynx. The arch of the plate was upward, and the roof or upper side of it toward the vertebral column. With the tablespoon and the aid of dressing forceps I was able to remove the plate of teeth without any difficulty. A man who lives in her house and some female neighbors knew that her teeth were lost, but had no suspicion that they were in her throat; they state they were missing at nine in the morning; they were removed at seven in the evening (ten hours afterward).

The case is remarkable from the patient being, as she states, unaware of the presence of the plate in the pharynx, and also from the small amount of suffering and inconvenience it induced.

#### REMOVAL OF A SEQUESTRUM.

Mr. ROBERT WOODHOUSE exhibited a sequestrum which had been removed from the lower jaw of a little girl five years of age by Mr. Frank Robinson, lately a student at the Hospital, and read the following notes of the case, which had been supplied by Mr. R. M. Theobald, of Blackheath:

The patient first came under Mr. Theobald's care in July, 1880. She had then great enlargement of the right side of the face, and on close examination this was found to be due to the presence of a large bony mass, like an exostosis, along the lower jaw. She had already been under treatment as an in-patient at Gay's Hospital for four and a half months, the swelling having first appeared about the beginning of the year. On examining the mouth, the molar teeth were found to have been extracted, and a constant discharge of fairly healthy pus was issuing from the sockets. Her general health was not much affected, though she had suffered greatly from pain, and had become somewhat weakened by the discharge of pus. At first Mr. Theobald was inclined to diagnose the case as one of exostosis, either of scrofulous or more probably syphilitic origin; but further observation satisfied him that the child was suffering from scrofulous necrosis of the jaw. About a month later pus began to flow also from the ear, and the submaxillary glands were much enlarged; the pus also became more offensive, often so much so as to render the room the patient occupied almost intolerable to other persons. There was occasional bleeding from the gums covering the diseased bone, but it was never profuse.

Under treatment her general health improved ; a hacking cough, which tormented her, ceased ; she gained flesh and strength, the pain was much mitigated, and the discharge became less profuse. The swelling, however, did not diminish in size, and the child was always excessively frightened by any attempt to examine it.

The patient continued in much the same state until December 28th, when Mr. Theobald found that a bony mass was protruding along the whole margin of the jaw, the alveolar ridge itself was in fact projecting above the level of the gum, a hard, rough mass, bathed in pus. It was quite loose, and might apparently have been easily separated, but, owing to the extremely nervous and sensitive nature of the child, Mr. Theobald was unwilling to attempt it without an anæsthetic. On January 8th, however, he put her under chloroform, and Mr. Frank Robinson removed the sequestrum by slight traction with forceps. The discharge of pus ceased almost immediately, and the swelling has since gradually diminished, though a considerable amount of enlargement remains. It appears that the periosteum of the maxilla was not destroyed, for a growth of new bone has already taken the place of that which was removed. The bony outline is perfectly distinct, and it seems probable that when the swelling has subsided little or no deformity will remain, and that the ordinary movements of the jaw will be re-established. Of course the lower teeth on the right side are lost, but they are well developed on the opposite side of the mouth.

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## THE ALUMNI ASSOCIATION OF THE OHIO COLLEGE OF DENTAL SURGERY.

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WE have been requested to publish the following :

CINCINNATI, *April 25th*, 1881.

*Dear Doctor :* At a meeting of the Alumni Association of the Ohio College of Dental Surgery, held March 3d, 1881, a committee, consisting of five members of the Association, was appointed to prepare for publication a history of the college and of each alumnus, and such other matters as would be of interest to the Association. The Committee desire a complete history of the college from its organization ; as complete as possible history of each alumnus, and biographical sketches of deceased alumni. To this end the Committee invite your attention to the inclosed list of questions, to which it is earnestly hoped you will take no exceptions and give a



few minutes' consideration at your earliest convenience, and forward to the Secretary, in order that the report may be as complete as possible.

N. S. HOFF, D.D.S.,                      W. D. KEMPTON, M.D., D.D.S.,  
GEO. WATT, M.D., D.D.S.,      C. I. KEELY, D.D.S.

E. G. BETTY, D.D.S., *Secretary*,  
126 West Ninth Street, Cincinnati, O.

Name in full. Place and date of birth. What, if any, literary institutions did you attend? Where, when and with whom did you begin the study of dentistry? What other, if any, dental colleges did you attend? State the localities in which you have practiced, and your present location (give the time in each locality). Are you a graduate of medicine? (state where and when you graduated). Of what dental societies have you been a member? What positions of honor have you held in or out of the profession? What have you contributed to dental literature? Married or single? Can you give any facts concerning any deceased members of your class? Give any facts of interest concerning the college, its faculty or alumni in your possession not contained in your answers to above questions.

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### KANSAS STATE DENTAL ASSOCIATION.

THE Tenth Annual Meeting of the Kansas State Dental Association was held at Topeka on May 3d, 4th and 5th. The following papers were read: "Dentistry and Society," by Dr. L. P. Meredith; "The Rational Ethics of Dentistry," by Dr. J. D. Patterson; "Deciduous Teeth," by Dr. W. H. Shultz; "The Old and New," by Dr. L. P. Wasson; "The Relation of the Teeth to the Brain," by Dr. R. W. Brown; "Odonto-therapy," by Dr. R. I. Pearson; "Cases in Oral Surgery," by Dr. J. D. Patterson; "Treatment of Salivary Calculus," by Dr. A. H. Thompson.

J. A. PATTERSON, *Secretary*.

LAWRENCE, KAN.

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A DAILY MEDICAL JOURNAL.—Dr. Landon B. Edwards, the editor and publisher of the *Virginia Medical Monthly*, brought out a daily edition of his journal during the recent meeting of the American Medical Association at Richmond, Va. It was a very creditable and spirited performance.

AMERICAN MEDICAL ASSOCIATION.

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At the Thirty-second Annual Meeting of the above, held at Richmond, Va., on May 4th, Dr. Alfred C. Post, of New York, read a paper on "Plastic Operations on the Face." The first case which he related was one of epithelioma, involving the left side of the face, about 55 millimetres in diameter, extending above to a line within six millimetres of the margin of the lower lid, and below to a line midway between the ala of the nose and the angle of the mouth. The patient was a man of sixty-one years of age. Dr. Post operated on the 15th of May, 1880, by making a horizontal incision, separating the morbid growth from the lower lid, and another parallel incision below the tumor, connecting the two by vertical incisions before and behind. He then dissected up from the adjacent parts the diseased mass, included between the four incisions, bearing a quadrilateral chasm, nearly a square form. The two vertical incisions were then extended downward, the anterior one to a little below the base of the lower jaw, and the posterior one nearly as low as the base of the jaw. From the inferior extremities of these two vertical incisions, curved incisions with their concavities looking backward and upward were made to the extent of five centimetres, including between them a peduncle of skin and subjacent tissues for the nourishment of the extensive flap. The flap was then drawn up and secured by sutures so as to fill up the whole space left vacant by the removal of the disease. The wound healed throughout, leaving the patient but slightly disfigured. The second case was one of absence of the upper lip, and of the columna nasi, as well as of a portion of the right ala nasi, occasioned by the application of a caustic paste for the removal of a supposed cancer of the upper lip. The patient was a man sixty-five years of age.

Dr. Post operated on the 1st of May, 1880. He commenced by separating from the cheek a small remnant of the upper lip, which remained at the left extremity, and reversing it so as to form a calumna for the nose. He then made two horizontal flaps from the cheeks with peduncles curved downward and forward, and united them by means of pins and sutures, so as to reconstruct the upper lip. A number of supplementary operations were required, and the result was a marked improvement in the appearance of the patient.

In using oxy-chlorides, Dr. G. A. Mills believes in mixing the material to a paste and squatting it into the cavity.

## PAROTID ABSCESS CAUSED BY A FRAGMENT OF HAY.

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BY EDWARD E. MEERS, M.D., PLYMOUTH, ENGLAND.

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AT the beginning of last October a healthy young man consulted me about an enlargement of his right parotid gland. The swelling was not very tender, but caused very great discomfort in mastication. I prescribed what I considered suitable remedies, and saw him occasionally. Weeks passed away, but the swelling and discomfort did not diminish; and about Christmas, finding that he had two decayed and tender molar teeth, I advised him to consult a dentist.

At the end of February my patient came back to me. He had had both his teeth extracted, but his parotid gland was bigger than ever. The tumor had been formerly of the natural color of the skin, but it was now covered with an inflammatory blush, and seemed to point in one particular spot. A deep puncture was made with a sharp narrow knife, and matter followed the incision. The wound continued to discharge for ten days, and at the end of that time a piece of hay, somewhat more than one-third of an inch long, escaped, the wound closed and the swelling subsided. The patient was under treatment altogether just six months.

The explanation of the case now seems simple enough. In the early part of September he went into the country for his holiday, and he distinctly remembered chewing some hay while he was watching a cow being drenched. A fragment of the hay became lodged between the gum and the cheek, but by working his jaw about he thought he dislodged and swallowed it. For several days afterward he had considerable pain in eating, but he attributed this to having sprained the muscles of the jaw in his efforts to dislodge his enemy. A month afterward the swelling of the parotid began. There can be no doubt, I think, that the little fragment of hay passed into Stenson's duct when it was thought to have been swallowed, and gradually worked its way up to the salivary gland in front of the ear, where it ultimately made its escape.

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A PEBBLE thrown into a pond moves many tons of water. A man cannot do good or evil without the effects of his acts being felt outside himself. Life is fuller of responsibilities than some of us imagine.

FASHION IN DEFORMITY.

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THE teeth, although allowed by the greater part of the world to retain their natural beauty and usefulness of form, still offer a field for artificial alterations according to fashion, which has been made use of principally in two distinct regions of the world and by two distinct races. It is, of course, only the front teeth, and mainly the upper incisors, that are available for this purpose. Among various tribes of negroes of Equatorial Africa different fashions of modifying the natural form of these teeth prevail, specimens of which may be found in any large collection of crania of these people. One of the simplest consists of chipping and filing away a large triangular piece from the lower and inner edge of each of the central incisors, so that a gap is produced in the middle of the row in front. Another fashion is to shape all the incisors into sharp points, by chipping off the corners, giving a very formidable crocodilian appearance to the jaws; and another is to file out either a single or a double notch in the cutting edge of each tooth, producing a serrated border to the whole series.

The Malays, however, excel the Africans, both in the universality and in the fantastic variety of their supposed improvements upon nature. While the natural whiteness of the surface of these organs is always admired by us, and by most people, the Malays take the greatest pains to stain their teeth black, which they consider greatly adds to their beauty. White teeth are looked upon with perfect disgust by the Dyaks of the neighborhood of Sarawak. In addition to staining the teeth, filing the surface in some way or other is almost always resorted to. The early universal custom in Java is to remove the enamel from the front surface of the incisors, and often the canine teeth, hollowing out the surface, sometimes, but not often, so deeply as to penetrate the pulp cavity. The cutting edges are also worn down to a level line with pumice-stone. Another and less common, though more elaborate, fashion is to point the teeth and file out notches from the anterior surface of each side of the upper part of the crown, so as to leave a lozenge-shaped piece of enamel untouched; as this receives the black stain less strongly than the parts from which the surface is removed, an ornamental pattern is produced. In Borneo a still more elaborate process is adopted; the front surface of each of the teeth is drilled near the centre with a small round hole, and into this a plug of brass with a



round or star-shaped knob is fixed. This is always kept bright and polished by the action of the lip over it, and is supposed to give a highly-attractive appearance when the teeth are displayed.

Perhaps the strange custom, so frequently adopted by the natives of Australia, and of many islands of the Pacific, of knocking out one or more of the front teeth, might be mentioned here, but it is usually associated with some other idea than ornament or even mere fashion. In the former case it constitutes part of the rites by which the youth are initiated into manhood, and in the Sandwich Islands it is performed as a propitiatory sacrifice to the spirits of the dead.

The projection forward of the front upper teeth, which we think unbecoming, is admired by some races, and among the negro women of Senegal it is increased by artificial means employed in childhood.  
—PROF. FLOWER, in *Popular Science Review*.

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#### FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

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THE following were the questions set at the written examination for the license in Dental Surgery, which took place recently :

##### *Anatomy.*

1. Give the origin, insertion and nerve supply of the muscles which depress the lower jaw.
2. Give the course, relation and distribution of the facial artery after it passes over the base of the lower jaw.

##### *Chemistry and Physiology.*

1. What is meant by the atomic theory? (Give the atomic weights of Cl, C, Fe and Hg.)
2. In what respect does an alkali differ from a base?
3. What are the physiological purposes served by the skin?

##### *Surgery.*

1. What do you understand by a case of tongue-tie? Describe the operation for its cure, and mention the danger to be avoided in the operation, and how.
2. Give the causes, symptoms and treatment of erysipelas of the face.

##### *Medicine and Materia Medica.*

1. Enumerate the diseases of the antrum, and state briefly their causes and treatment.

2. What are the physiological actions and therapeutic effects of the sulphates of magnesia, of soda and of quinine. In what doses are they prescribed?

*Dental Anatomy and Physiology.*

1. Describe the microscopic appearances of a shedding deciduous tooth-fang.

2. Enumerate and shortly describe the varieties of dentine in man and in the lower animals, giving an example of each.

3. Identify the specimens Nos. 1, 2 and 3 under the microscope.

*Dental Surgery and Pathology.*

1. What conditions pertaining to dentistry may give rise to closure of the jaw, and what would be your treatment?

2. What symptoms indicate irritation and inflammation of the pulp and irritation and inflammation of the membrane? Give the treatment necessary for the preservation of the tooth in each case.

3. Give at least three forms of accident that may occur during tooth extraction (exclusive of fracture of the tooth or neighboring teeth) and state the reparative treatment for each.

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ROYAL COLLEGE OF SURGEONS IN IRELAND.

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At the Dental Surgery examinations, recently held, the following questions were put to the students:

1. A lower molar tooth being fractured during extraction, what ill effects may follow if the roots are allowed to remain?

2. Mention the different circumstances in which you would advise extraction.

1. Describe the mucous membrane of the tongue.

2. Under what circumstances have Haversian canals been found in the crista petrosa?

1. Name and describe the different appliances for, and modes of treatment of, fractures of the lower jaw.

2. What circumstances may necessitate extirpation of a lower jaw? Give the different risks and dangers attendant on such operation.

1. Name the different bases used on which artificial teeth are mounted, and give your opinion of each.

2. Name the diseases that may arise from a blow on a tooth, and give their treatment.

1. What would be your treatment before molding for an artificial denture the mouth of a person suffering from the effects of either mercury or alcoholic stimulants?

2. In second dentition, what consequences may result from the removal of the temporary molar teeth two or three years previous to the eruption of the permanent bicuspid?

1. Give the boundaries of the parotid gland, its muscular, vascular and nervous relations, trace its duct, and explain its conservative actions on teeth.

2. Contrast the upper and lower molars; describe their connection with alveoli, and give the origin and course of the nerves and blood-vessels which supply them.

[We are informed that out of sixty-eight candidates who presented themselves for this examination twenty were unsuccessful.]

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### ALABAMA DENTAL ASSOCIATION.

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THE next Annual Meeting of the Alabama Dental Association will be held in Selma, Ala., on the third Tuesday (19th day) of July, 1881.

The State Board of Dental Examiners will meet at same time and place. Every dentist in the State is expected to be present, as under the late Act of the Legislature every one practicing dentistry in the State is compelled to have a license from this Board.

All dentists are cordially invited to be present.

T. M. ALLEN, *Recording Secretary.*

EUFAULA, ALA.

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### SIXTH DISTRICT DENTAL SOCIETY, N. Y.

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AT the Annual Meeting of the above Society, held at Binghamton, on May 5th, the following officers were elected: President, L. E. Ireland, Oneonta; Vice-President, E. S. Walker, Greene; Recording and Corresponding Secretary, A. J. Wright, Oswego; Treasurer, F. B. Darby, Elmira; Censors, A. M. Holmes, F. B. Darby and H. Hodge; Delegates to State Society, L. E. Ireland and A. M. Holmes. The Semi-Annual Meeting will be held at Courtland, Thursday, October 6th, 1881, the Fifth District Dental Society holding a Union Meeting with the Sixth.

A. J. WRIGHT, *R. & C. Sec.*

## EDITORIAL NOTES.

## DENTISTRY IN ALBANY.

ALBANY is a fairly respectable old city, but its dental morals are not as high in temperature as they ought to be. It has some dentists sheltered under its roofs who are no credit to the profession. Sign-boards are to be seen all over the city—"Extracting, 25c.; gum sets, \$"—prices vary. The acme of disgust is reached by the visitor who has any regard for the fitness of things, in coming on one house occupied by a dentist or dentists who has (or have) adopted a very high-sounding title. In front of the house—which is a respectable-looking place enough—is an old rickety post, across which is nailed an equally rickety piece of board bearing these words: "Best gum sets, \$6; extracting, 25c." The house is somewhat disgraced by this exhibition. A man with the smallest bit of art in his soul could never tolerate that ugly board in front of his house, painted, as it evidently was, by an amateur, with a piece of stick, some white paint and some ink.

Why do we mention this nasty feature of dentistry in Albany—this glaring from sign-boards in every street the dreadful announcement that extracting can be done for twenty-five cents and new teeth inserted at low prices? Simply because we desire to call attention to the need there is of public feeling in Albany, and all places where a similar state of things prevails, ousting such sign-boards. But the long-suffering and ignorant public is severely handicapped in its well-nigh inanimate search for dental knowledge. Wherever it goes it has thrust before it the cheapest terms at which teeth can be pulled out and artificial ones put in. How has the public a chance to know that there is such a thing as operative dentistry? How are they to learn that surgical and mechanical work is all that the dentist can do? There are in Albany some dentists who are very good fellows—men who know what is their duty and who intend to do it. They have a huge task before them.

## THE DENTAL SOCIETY OF THE STATE OF NEW YORK.

All these remarks are suggested by wanderings made in Albany during the session of the Dental Society of the State of New York. A portion of the proceedings will be found, as given by our reporter, in other columns of the MISCELLANY. The members were heralded by the leading journal of the city as "teeth-pullers."



(Here is an evidence of the crass ignorance of the reporter for that journal as to the functions of the dentist. But he is to be pardoned for his ignorance, for wherever he goes he meets the hateful sign-boards to which we have referred above, and draws his own conclusions therefrom.) The meetings were a great success in every way. The weather was hot—above 90 degs. Fah.—but the attendance was good, the papers read were abundant, interesting and instructive, and the discussions were lively.

#### THE PRESS AND DENTISTRY.

It is difficult to decide whether reporters for newspapers deserve more credit for the good work they do than blame for the blunders they make. The American reporter is *sui generis*. He is a man possessed of precious little good taste. He sacrifices taste, sense, the feelings of his fellow-men, and truth even, in his ponderous efforts to be funny. Sometimes his play on words, at the expense of all reason, awakens the contempt of men of brains, and it is difficult to see whose favor he gets which compensates him for the disfavor he secures from the more sensible of his readers. Some time ago one reporter announced a meeting of dentists as a "Tooth Carpenters' Convention;" another as "The Jig of the Jaw Jammers." This is all very funny undoubtedly (though we do not see where the fun comes in); but, spite of the alliterative effects of the "jig of the jaw jammers," the dentist with any respect for himself and his profession will never forgive the newspaper that is capable of such an atrocity. At least, we should not. Perhaps others are less sensitive. The Press is a vast agent for the dissemination of knowledge of all kinds, but such exhibitions of feeble wit are contemptible.

#### DENTAL FACTS FOR CHILDREN.

It has been contended with some little force that it is the duty of dentists to visit schools in their neighborhood and impress on the children the necessity of caring for their teeth. There is a great deal of sound sense in this suggestion. It was stated that the school-house is the place to teach the masses that their teeth need not decay, and that they can be preserved intact by cleanliness. Absolute cleanliness of the teeth is not an absolute safeguard against decay of the teeth, but it is a safeguard to a certain extent, and therefore, to a certain extent, such teaching will be of value. But we should also look for fruit to follow this teaching in the warning

children would have against those men who set up to practice as dentists who do nothing but pull teeth and fix in new ones. These gentry would be injured in their pockets, and the general public enormously benefited in their mouths, by an understanding of the children of some elementary dental facts. What can be done in this matter?

#### IS THE HUMAN STRUCTURE DETERIORATING?

It is not that we possess any inherent love of controversy that we discuss this question. In our March issue we ventured to question a statement that Dr. W. R. Holmes made in the *Dental Luminary*, to the effect that there is a gradual deterioration of the human structure going on. In his journal he upholds his view of the case in a way which is certainly very friendly to us. There is, after all, no real difference between the views Dr. Holmes holds and those held by ourselves on the question at issue. The only difference is in our interpretation of the term "human structure." We gave the term a more comprehensive, a more all-embracing interpretation than the Doctor. We took it to refer to the entire make-up of man—to include not merely his bones, flesh and blood, but his brain—his entirety. Perhaps we were wrong in doing this. But the division between matter and mind is so occult—where the "structure" ends and the man himself begins is so undiscoverable—that we may be pardoned. Taking man as a whole, body and mind, every function he possesses, we think he has not deteriorated. Perhaps his casket may be less able to lift heavy stones, and may be more susceptible to cold. But then he does not so much need to lift stones as he did, and he has better houses to shelter him from the cold. We thank Dr. Holmes for his patience under criticism, and are sure he will agree with us in our view as to the real issue between us.

#### A TOOTH STORY.

A story comes from the West which contains in it the elements of possibility, to say the least. A young lady while riding through the streets of Cheyenne a few months ago was thrown violently from her horse and knocked one of her front upper teeth out against a lamp-post. She went to a dentist, who, being an artist, dreaded being compelled to insert a false tooth among those which composed his fair patient's brilliant set. He accordingly offered a young man, whom he saw loitering in the street, \$100 for one of his teeth, the dentist seeing that what he was buying was exactly the thing in

size, shape and color that he wanted. The bargain was made, and the tooth transplanted successfully. Time passed and the young man traded with the \$100, made another \$100, and eventually became rich. He was introduced into society, and, what was more important and romantic, into the society of this young lady. It is stated that he has now got his tooth back at the altar.

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## PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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THE English correspondent of the *Missouri Dental Journal* has a rather caustic pen, and he has been using it to some purpose. In the current number an article appears from him entitled "Dental Reform," and in it he flings his cutting assertions right and left at that portion of the long-suffering British public who are at the head of English dental politics. The article deals chiefly, it is true, with a critic who has been impugning the correspondent's previous assertions, but there are thrown in sideways a number of general remarks which are more or less undeserving. Among other things he speaks of "the British Dental Association, which, notwithstanding its high-sounding name, is little else than a private detective agency and trades union combined, and is, so I am told, in accordance with its objects in promoting the interests of the trade and putting down 'knobsticks' actually registered in company with the friendly societies." The *Journal* correspondent does, however, get the better of his English opponents in calling attention to an advertisement hailing from Liverpool, in which an "L.D.S." of that city offers to "coach" gentlemen up in the mysteries of dentistry by his "practical postal system." While the writer is rather too severe in some of his strictures, he yet hits the nail several times on the head, and points out that English dental ethics are capable of improvement.

In the *American Journal of Dental Science* I find an address to the Graduating Class of the Baltimore College of Dental Surgery by the Rev. William Kirkus, M.A., LL.B. He makes some very good and sensible remarks in his speech, but there are a few things which are open to criticism. For example, he says: "I advise you (the students) never to forget that you are *physicians*." Now, the graduates of the Baltimore College are not physicians. It is the

question as to whether dental students should become physicians before they are dentists that is agitating the minds of the dental world just now. The magazines are teeming with articles on the position of dentistry as a profession. A physician is not a dentist unless he has learned the profession, and a dentist is not a physician unless he has learned that profession. But, at the same time, the Rev. Mr. Kirkus said some very good things. As an instance I would quote the following: "As a professional man never works only for money, and will never be bribed at any price to do inferior work, so he will recognize that he is a public instructor. One of the greatest services that physicians have rendered to the world in modern times has come from their persistent endeavors to render their own services unnecessary. Think how much is implied in such advice as this: You don't want a doctor, but a plumber. Don't take medicine; filter and boil the water you drink, and buy milk for a while at some other dairy. \* \* \* Nothing has given me a more exalted opinion of the high honor both of the legal and medical professions than the extreme rarity of cases in which they have abused their enormous powers. The majority of mankind are absolutely powerless in your hands—they will do whatever you command, they believe almost anything you say." There is in this a soundness which is worth considering.

In the *Independent Practitioner* Dr. Lawrence Turnbull has an article on "Anæsthetics and Narcotics." He maintains, among other things, that the effects of chloroform and its compounds, or the various ethers employed for anæsthetic purposes by inhalation, do not differ materially from the class of remedies called narcotics. He laments that with the medical profession of this country there has not been more investigation of the subject of anæsthetics, and that more facilities have not been offered the profession of making original investigation. He complains that the men who have studied the subject for years have not done more original writing, but have contented themselves with reviewing the work of others. At the same time the writer admits that publishers in this country absolutely refuse to publish works on such subjects as anæsthesia. This fact points unmistakably to the conclusion that there is no demand for such works. Dr. Turnbull announces that his confidence in chloroform as an anæsthetic "is most thoroughly shaken." He then quotes cases of death which have resulted from the administration of chloroform. The article is to be continued.



This journal (the *Independent Practitioner*) has added a very interesting feature to itself in the shape of a popular science department. We hope the department will be popular.

The *Dental Luminary* is heavily freighted with original articles, and if its proprietors are at all surprised at its prosperity we are not. Its articles are not heavy disquisitions on recondite subjects (though such articles are in place elsewhere), but they are just such articles as a dentist will read when he is tired.

Dr. Allen, of Eufaula, says, in an article on Celluloid, that his experience with it is that it is as far superior to rubber as natural teeth are to artificial. I am not about to argue the point with the Doctor, but my respect for natural teeth and my objection to the artificial are great.

The *Dental Jaiirus* publishes a letter from Dr. A. F. McLain on the Cogswell Dental College question, and a reply from Dr. W. H. Robinson. It is difficult to properly judge the state of dental public feeling in California from this distance, though all this correspondence and all this article-writing on the subject that we have had gives us a certain amount of insight into the matter. If a child is given some valuable article for which it has no use and which it does not care about, no amount of persuasion will at once get that child to use it aright. It must have time to realize the value of the gift. It is very much the same with this Dental College business. The dentists in the Far West are apathetic simply because they do not know the value of a dental college. They might, perhaps, condescend to withhold their opposition if Dr. Cogswell would give about ten times as much to the college as he has done. What they object to is to have to give anything themselves, unless it is cold water, and of that they have an abundance. One of the opponents of the scheme as it now stands advises Dr. Cogswell to be guided by "the ministers of peace instead of the monsters of discord." Under no circumstances should I call Dr. McLain and those who take his view "monsters of discord." Equally certain am I that I should not call them "ministers of peace," unless I did so ironically.

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THE GERM THEORY.—At the late meeting of the American Medical Association, the suggestion of the Germ theory was a red flag in the section of internal medicine. Every allusion to it was met with opposition on the part of the older members trained exclusively in the school of experience.

PROFESSOR MAYR CRITICISED.

*Dear Sir :* I see in your April issue a report of a paper read by Dr. Chas. Mayr on the chemical and physical effects of fillings upon teeth. \* \* \*

I have not time or inclination to follow Dr. Mayr through all his statements, but I will take one or two which can be readily proved to be incorrect. In good amalgams the contraction, *when it exists*, is so small as to be measured or discovered only with the greatest difficulty. It is then so slight as to be of not the smallest importance in any filling, whatever its size. It would appear that Dr. Mayr has mistaken change of form caused by excess of mercury, slow setting, presence of moisture, or other reasons.

He states that all silver amalgams are very soft, shrink considerably, and lose relatively easily their mercury. Before he makes such a statement again, I should suggest that he take a small bottle or tube with a tightly-fitting glass stopper, fill this close up with an amalgam of precipitated silver and mercury, and wire the stopper firmly down. In a week he will find either his bottle burst or the stopper driven out by the expansion of the block which he states will shrink. This expansion is so great as to be very easily visible, and is sufficient in many cases to burst a tooth in which this amalgam is used. The intense hardness of precipitate silver amalgam and the extraordinary avidity with which the mercury is taken up are too well-known to need comment. The only wonder is, that this statement was not at once questioned by every one present at the meeting where his paper was read. He states that mercury evaporates from platinum, *as if* no combination had taken place. No doubt it does *when* no combination takes place, but if he will either combine platinum alone with mercury (not mix it only), or will use a combined alloy with and without platinum in combination, he will not need to be told the difference. Platinum in combination reduces the time of setting of almost every alloy to about one-fourth to one-tenth the time necessary in its absence, and increases the mechanical hardness from 20 to 100 per cent., depending on the nature of the alloy used.

Platinum is most difficult to get into combination, and those who have failed to find its action have blamed the platinum instead of blaming their own ignorance. If the same alloy is taken with and also without gold, the former will be found cleaner and pleasanter :

to work, packing rather more easily; but the difference in quality, independent of pleasantness in working, is very slight. For actual duty it is the least valuable of any metal present in an amalgam, and yet the difference in working is so appreciable that a dentist accustomed to an amalgam containing a good percentage of gold will not readily use any other; he does not like the peculiarities given by absence of gold in the alloy. Gold is readily got in combination, and its action easily studied; platinum, on the contrary, is most difficult to manage, and many would fail totally in getting it in combination in an alloy so that its presence would be of any advantage. Copper has, to a very limited extent, similar properties in a compound alloy to platinum, and is easy to get in combination.

I would suggest that Dr. Mayr tests an alloy with and without five and also ten per cent. of copper. He says he has proved by experiment that oxy-phosphates resist far more than oxy-chlorides, and are therefore to be preferred. If he means they resist the action of solvents far more, I should suggest that he tests a well-made oxy-chloride against a carelessly-made oxy-phosphate, and he will find his results reversed in a manner he does not apparently expect. The two fillings made with equal care, and prepared equally well, are as nearly as possible alike in permanence and resistance to all solvents. If anything, the advantage is in favor of a first-rate oxy-chloride of zinc, which is at least as good as the best white filling yet in general use, although the fashion has at present turned to oxy-phosphates of zinc, because of their great mechanical hardness.

THOS. FLETCHER, F.C.S.

Warrington, England.

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DENTISTRY AT RICHMOND.—At the recent meeting of the American Medical Association at Richmond, Va., Dr. Toner, of Washington, D. C., killed the project of incorporating the new section on dentistry into the session by his single dissenting voice. The section is a fixed fact, but its work is deferred for a year.

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IN our May number of MISCELLANY, where we gave a list of graduates from the Dental Department of the University of Michigan, the name of L. D. Wood, of Lowell, Michigan, was omitted. This was an error. The name should have been among the list of graduates, as follows: L. D. Wood, D.D.S., Lowell, Mich.—*Ed.*

JOHNSTONS'

# Dental Miscellany.

VOL. VIII.—*July*, 1881.—No. 91.

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## CIVILIZATION, AND ITS EFFECT ON THE TEETH.\*

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BY DR. NORMAN W. KINGSLEY.

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THE most important problem now confronting the dental profession is embodied in the inquiry made daily by anxious parents in substantially the following form: "Why do my teeth decay more rapidly than my father's and mother's did, and why are my children's teeth decaying at an earlier age than my own did?" The inquiry does not come from those who neglect their teeth, who never consult their dentists, nor from the lower classes of society, who are as careless of their teeth as of every other personal attention. It is not confined to any race or nationality, or by the seasons, climate or locality. It comes from the class who are the most intelligent, the most cultured, the most finely organized of any—from people who appreciate the importance of hygienic laws, who give much care to the preservation of their bodily health, and who attend to their teeth. This inquiry that I have quoted is the inquiry put to the professional man, and it is one which is by no means easily answered.

It is useless to treat it lightly or deny the premises, for though

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\* [At the Annual Meeting of the Dental Society of the State of New York, held at Albany in May, a prize essay was read on the above subject by Dr. Kingsley. Herewith we give abstracts of the same from our reporter's notes.—ED. J. D. M.]



the inquirer may have no statistics, he has a memory, and his opinion is confirmed by the observations of most of his acquaintances. Cases are exceedingly rare, if they exist at all, where the teeth of the children are sounder than the parents', and we must admit that the dental organs are beginning more and more to degenerate with each generation.

The dental practitioner holds a place of authority to his patients if he is more than a mechanic, but what response has he? It is not difficult to formulate an answer that will satisfy many. It requires but little tact to give an answer which covers one's ignorance, even though the questioner may be well versed in other branches of science.

Probably the most universal idea among cultured unprofessional people as to the cause of decay of the teeth is summed up in the word "candy." At least nine-tenths of parents seem to think this, and they believe that if they keep candy from their children, and if their teeth still decay, then that decay is proof positive that they get candy surreptitiously. There is no more fallacious theory. It is just sufficiently plausible to save it from absolute rejection. Pure candy in moderate quantities never harmed any child. It is as legitimately an article of food as pickles or preserves.

Another explanation for the decay of teeth which has gained some credence is contained in the discovery that ice-water and hot drinks are on the increase. It was gravely asserted at a gathering of medical men a little while ago that the common habit of drinking hot coffee followed by ice-water caused expansion and contraction and cracking of the enamel, which was followed by caries. It is doubtful if a cavity ever originated from this cause. If there are pernicious results following the use of hot and cold drinks, it is not in their directly causing caries.

Another favorite theory is that the use of soft food, instead of that which requires more mastication, is a cause of tooth decay. It is plausible, from the fact that the various tissues of the body become strengthened by use. But among the opposing arguments may be introduced the fact that the Esquimaux, living on whale-blubber, and the Chinaman, living on boiled rice, and the savage, who lives on nuts and fruits, have the same quality of teeth, except that the latter has his worn down more quickly.

Another is the brown bread theory, which has been so persistently advanced, and it has a much more solid foundation on which to

rest. Bread made from unbolted flour possesses far more elements which go to make up tooth structure than bread made from fine flour. But man does not live by bread alone. Bread occupies but a small part of the bill of fare on the more luxurious tables, and it is a question if a family brought up on brown bread would have teeth better than one that never eats it at all.

Still another theory is embodied in the statement that contact of teeth always produces decay. That teeth frequently decay where there is contact must be admitted, but that contact is anything more than an incident in the decay of teeth remains to be shown.

Another theory is that a lack of cleanliness produces decay. This is a proposition that becomes more forcible when put in the affirmative form, that if teeth are kept perfectly clean they will not decay. It is unquestionably a fact that uncleanness is only a factor associated with other causes of decay of teeth. With all the other factors eliminated, it is not likely that teeth would decay from uncleanness. To many of our ancestors the operation of cleaning their teeth was unknown, and we frequently see perfect dental structures that have never been cleaned, as cleanliness is at present understood. Nevertheless, this theory is the most plausible of all practical theories, but it is more potent in its remedial character than as an explanation of the primary cause.

Each and all of the theories thus far referred to may be classed among the secondary causes, each of which may have some application in some individual cases. Climatic influences are the causes, says another, while still another maintains that intermarriage or mixing of types is the cause. These terms, though not entirely meaningless, have only a vague and indefinite relation to the subject in the minds of those who use them. The more one reflects, the less is he inclined to think that climatic tendencies are anything more than coincidences. The changes from heat to cold, from damp to dry, do not affect tooth structure of themselves, nor does the prolonged continuance of any of these conditions produce any visible change. Inhabitants of the torrid and frigid zones have equally good masticating organs. Districts may be malarious to the unacclimatized, but failure of tooth structure follows only as a secondary result.

Intermarriage, interbreeding, or crossing of the different types of the human race, should not affect tooth structure. Judging from the results that follow the crossing of breeds in animals, improve-

ments should be expected. To breed from diseased subjects, and deformed subjects, carries with it its own penalty, but the evil does not result from the interbreeding, but from the quality of the subjects chosen.

Other subtle theories are often used without much understanding: violation of hygienic laws, hereditary predispositions, etc.; but the most comprehensive of all these evil agencies, and the most unchallengeable of all, is—civilization.

What is civilization? What has civilization to do with the decay of the teeth? Civilization means an emerging out of barbarism into refinement—out of ignorance into knowledge—out of bondage into liberty—out of privation into comfort. Civilization expands the intellect, represses vice and savage instincts, cultivates virtue and noble aspirations. It encourages the growth of manly habits; it makes possible a life of luxury and ease, the accumulation of wealth, the cultivation of art, and the gratification of the æsthetic tastes. It provides railways, telegraphs, factories, and brings to our attention the infinitesimal organization and the boundless worlds of space. It is the means by which we reach the highest state of intellectual and moral development. Through it are to come the grandest achievements the race ever attained—the possibilities of which are so much greater than have yet been conceived. Only through civilization will the millennium ever be attained. It is the normal condition of mankind—entirely consistent with perfect health of the teeth.

Civilization is made out to be the author of nine-tenths of the disorders that affect mankind. In rude and barbaric races the weakest must go to the wall: but in civilization the sickly child is nurtured tenderly into manhood to become the progenitor of a family. Civilization is not responsible for the disorders of a civilized community. Disease, degeneracy and decay arise from the abuse of the resources and products which civilization brings. Filthy abodes and vitiated atmospheres bring diseases which sap the foundations of life; but neither of these evils, nor all combined, will produce the disastrous effects to the teeth which follow the habits of the more cultivated classes. Caries of the teeth is only incidentally connected with the diseases which prevail among the class who are content when food and clothing are provided. Fever and other epidemic diseases do not of themselves cause teeth to decay.

We find to-day physical labor exchanged for mental—strain of

mind takes the place of strain of body. Muscular tension ceases, and nervous strain takes its place. The individual, no longer content to satisfy his daily wants, tries to accumulate wealth and to be envied by former associates. Refinement and culture bring new ambitions, new responsibilities and new necessities. Every added anxiety brings an additional mental strain. The mind is constantly on the alert—the brain has no rest. There is no denial of the fact that diseases of the brain are alarmingly on the increase. Decaying teeth and nervous diseases are correlated—both are symptoms of a common cause. Neurosthenia or nervous exhaustion is the condition of many highly-cultured men and charming people of modern society. Every intellectual faculty contains within itself possibilities of the highest enjoyment, but when stimulated to excess or abnormally used all the bodily functions are impaired. Teeth decay primarily because the nutrition of their organic structures being obstructed, retrograde metamorphosis ensues.

When nutrition is insufficient or diverted, and the power of its vitality inadequate to resist the destructive agents present, the tooth yields at its weakest part, and caries is the result. Herein we see reasons for caries having begun and then ceased. Parents whose teeth are decaying, because of diverted nutrition or exhausted nervous force, transmit this condition to their offspring, and it becomes to them constitutional. Children born of such parents enter the race of life handicapped. That which was possibly but a temporary cause in the patient may become a fixed characteristic of the child, to be fought against and battled with through life. A child entering life under such unpromising circumstances will show bad teeth, and, unless constant and active effort is made, the steps on the downward grade are as inevitable as mathematical law. Every mental or emotional excitement only aggravates the inherited and constitutional tendency, and the teeth succumb to these agencies.

The remedy for this state of things, and the salvation of the teeth of the community from degeneracy and destruction, involves a return to a life more in accordance with natural law ; but from civilization must yet come the grandest specimens of humanity that the world has yet seen, without spot or blemish, without taint of disease.

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ABSOLUTE cleanliness alone is compatible with absolutely perfect health.



## OUR DENTAL COLLEGES.

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It has been suggested to us that we should render a service to the readers of the MISCELLANY and their friends by publishing such facts concerning our various dental colleges as are likely to be of value to those who desire to study the art of dentistry. We have been at some pains to secure the necessary data, and, as our compilation is not absolutely exhaustive, we are ready to make any addition to it that may be forwarded to us.

### BALTIMORE COLLEGE OF DENTAL SURGERY, FOUNDED 1839.

The Baltimore College of Dental Surgery was organized, under a special charter from the Maryland Legislature, in 1839, being the first institution ever founded in the world for the purpose of giving regular collegiate instruction in this important branch of medical science. It was an experiment, but it had a substantial basis in the necessities of the human race, and came in answer to the demand of civilization for progress in useful and beneficent sciences. Its originators were men of great public spirit and foresight, yet they could scarcely have anticipated the wonderful results which have followed their enterprise.

During the years of the existence of this school over eighteen hundred students have attended its annual session.

The course of study at this institution embraces the principles and practice of dental science and surgery, anatomy, physiology and pathology, therapeutics and materia medica, chemistry, dental mechanism and metallurgy, together with other studies. Clinics and demonstrations are held daily throughout the season.

*Terms of Graduation, Statutes, Etc.*—Each candidate for graduation must present himself for examination before the faculty upon all subjects taught in the College. Prior to such examination he must show specimens of operations upon the natural organs, and present an approved specimen of dental mechanism constructed in the College: also, he must have attended two full courses of lectures in this College.

The following, however, will be considered as equivalent to an attendance on one course of lectures in this College: One course in any reputable dental college, prior to matriculation in this College; five years' dental practice, including regular pupilage; a satisfactory examination on entering college. The student meeting either of the above requirements will have the privilege of presenting him-

self as a candidate for graduation at the end of but one course of lectures.

All students, whether graduates of medicine or dental practitioners, are required to attend regularly upon all lectures, demonstrations and clinical duties, and be examined by each member of the faculty.

The final examinations are held in the presence of a committee appointed by the Board of Visitors.

The Clinical Corps consists of a large number of the most distinguished operators in this country.

The fees each session are \$100, demonstrators' fees included : matriculation fee, \$5 ; diploma fee for candidates for graduation, \$30 ; dissecting ticket optional. *These fees, with the exception of the diploma fee, are expected to be paid on matriculating.*

*Text-books.*—Harris' "Principles and Practice of Dental Surgery ;" Biddle's "Materia Medica ;" Gray's, Wilson's or Handy's "Anatomy ;" Dalton's or Kirke's "Physiology ;" Fowne's "Chemistry ;" Harris' "Medical and Dental Dictionary." These text-books can be purchased for about \$25. All the instruments required can be procured for from \$25 to \$30, and are useful in after practice, the College furnishing the extracting forceps, vulcanizers, lathes, and all large instruments,.

Graduates of the Baltimore College of Dental Surgery are required to attend *but one session* at the College of Physicians and Surgeons of Baltimore prior to presenting themselves as candidates for the degree of Doctor of Medicine. The infirmary in the College building is open during the entire year for dental operations, and students can enter at any time by paying \$50, which is deducted from the fees of the succeeding regular winter course.

Further information can be obtained of the Dean, Dr. F. J. S. GORGAS, 259 North Eutaw street, Baltimore.

#### PENNSYLVANIA COLLEGE OF DENTAL SURGERY, FOUNDED 1855.

The Pennsylvania College of Dental Surgery was organized in 1855, and since that time it has been constantly growing in popularity and strength by virtue of its increasing curriculum, consisting of a wider range of studies and lengthened time of sessions, until now it offers annual opportunities to every student, embracing the whole year with the exception of the months of July and August. The regular winter session extends from October 1st to March 1st.

The term of pupilage or studentship required consists of two full winter sessions previous to coming forward for graduation, unless the candidate has been in actual practice since 1875. Then one session only will be required to entitle him to come forward for examination and graduation. The fees for the two years, including matriculation, dissecting and diploma fees, are \$245. The books required can be procured for about \$20, and instruments for about \$30.

Any further information desired can be obtained from the Dean, Dr. C. N. PEIRCE, 1617 Green street, Philadelphia.

#### NEW YORK COLLEGE OF DENTISTRY, INCORPORATED 1865.

THE following is the course of instruction: Regional anatomy, practical anatomy, oral surgery, operative dentistry, dental therapeutics, viscera anatomy and physiology, histology, practical histology, chemistry and mechanical dentistry.

The requisites for graduation are that the candidate be twenty-one years of age, and of good moral character. Students shall be required to have spent two full years with a preceptor in the study and practice of dentistry (attendance on two infirmary courses is considered equivalent to a private preceptorship), inclusive of attendance on two regular sessions or lectures in a recognized dental college, the last of which shall have been in this institution.

The candidate for graduation must deposit a specimen of mechanical dentistry in the museum of the College, made by himself in the institution, pursue one course of practical anatomy, pass satisfactorily a written and oral examination by the faculty, and a practical examination before the Professors of Operative and Mechanical Dentistry.

A graduate of medicine is accredited one year of study, inclusive of one course of lectures.

The following are the collegiate-year fees for the two years: Matriculation, \$10; lectures, clinics and practice, \$200; practical anatomy, inclusive of matriculation at Medical Department of the University of the City of New York, \$15; graduation and diploma, \$30—total, \$255. Optional fees are as under: Infirmary course, daily practice, March 1st to October 1st, \$90; practical histology class, \$15—total, \$105.

The following books are recommended:

FOR TEXT-BOOKS.	BOOKS FOR REFERENCE.
ANATOMY—Gray. ....	Quain's "Anatomy."
PRACTICAL ANATOMY—Heath.....	
PATHOLOGY—Green.....	Bilroth, Paget.
DENTAL PATHOLOGY—Wedl.....	
ORAL SURGERY—Bryant's "Surgery".	Heath (Jaws), Clark (Tongue), Mason (Lips).
OPERATIVE DENTISTRY—Taft.....	Harris (Principles and Practice), Tomes, Salter.
ORAL DEFORMITIES—Kingsley.....	
PHYSIOLOGY—Dalton. ....	Foster, Hermann.
HISTOLOGY—Frey's "Compendium"..	Stricker, Frey.
CHEMISTRY—Attfield's "General and Medical Chemistry".....	Roscoe and Schorlemmer's "Treatise on Chemistry" (2 vols).
PHYSICS—Pyncheon.....	
MECHANICAL DENTISTRY—Richardson.	
MEDICAL DICTIONARY—Dunglison....	
MATERIA MEDICA AND THERAPEUTICS—Bartholow.....	Farquharson, Wood.
PROP. AND TREAT. OF THE METALS—Bluxon.....	

The instruments required cost about \$70.

Further information may be obtained of the Dean, Dr. F. ABOTT, 22 West Fortieth street, New York City.

#### BOSTON DENTAL COLLEGE, FOUNDED 1868.

The following is the course of lectures: Dental science and operative dentistry, clinical dentistry, dental art and mechanism, anatomy and physiology, principles and practice of surgery, pathology and therapeutics, chemistry, physics and metallurgy, dental histology and microscopy. Instruction is also given in the infirmary and laboratory and hospitals.

The candidate for graduation must be twenty-one years of age, of good moral character, must have pursued his professional studies three years under a competent instructor, and attended two full courses of lectures in this College. A certificate of attendance upon one course of lectures at any other recognized dental or medical college may be considered a substitute for the first course.



He must pass a satisfactory examination before the faculty, and treat two or more patients requiring some dental operation, and bring them before the Professor of Clinical Dentistry. He must make one artificial denture and bring the patient for the same before the Professor of Mechanical Dentistry.

He must deliver to the Dean, previous to the 1st of February, a thesis, written by himself, on some subject pertaining to dentistry. He must deliver a specimen of mechanical dentistry to the Professor of that chair, which will be properly labeled and placed in the museum.

The fees are as under: Matriculation fee (paid but once), \$5; full course of lectures, \$100; demonstrator's ticket (anatomy), \$5; diploma, \$30—total, \$140.

The text-books and works of reference are: Gray's or Wilson's "Anatomy;" Dalton's, Flint's or Küss' "Physiology;" Miller's "Elements;" Bloxam's "Chemistry;" Harris' "Principles and Practice of Dental Surgery;" Taft's "Operative Dentistry;" Richardson's "Mechanical Dentistry;" Dunglison's "Medical Dictionary;" Bryant's "Surgery;" Tomes' "Dental Anatomy;" Bristowe's "Practice of Medicine;" Bartholow's "Therapeutics;" Beal "On the Microscope;" Schaeffer's "Histology;" Garretson's "Diseases and Surgery of the Mouth;" Kingsley's "Oral Deformities;" Magitot's "Dental Follicle," and Wedl's "Dental Pathology."

For further information address J. A. FOLLETT, M.D., Dean, 219 Shawmut avenue, Boston, Mass.

#### HARVARD UNIVERSITY—DENTAL DEPARTMENT, FOUNDED 1868.

General anatomy, physiology and general chemistry are the studies of the first year, the dental students taking the whole first-year course of the Harvard Medical School. The studies for the second year are operative and mechanical dentistry, dental materia medica and therapeutics, oral surgery and surgical pathology. Other studies are optional, the student having the privilege of attending, without additional charge, the instruction given in any other department of the University, with the exception of the exercises carried on in special laboratories. Attention is called to the fact that eighteen months of progressive instruction compose the required two years in the school, more than double that given in some, and nearly twice that of any other school in the world, at only a slightly in-

creased expense. Also, that the second year does not repeat the work of the first, but covers entirely different ground.

In the Operative and Mechanical Departments measures are taken to keep fully abreast of the times, the great number of patients who apply for operation giving full opportunity to the student for practicing and becoming familiar with every phase of dentistry. The infirmary of the Massachusetts General Hospital furnishes abundant facilities for operations; there is a fine, well-lighted laboratory for mechanical work, and a large city guarantees ample material for both.

Clinics by the most distinguished specialists are given at intervals throughout the year. At the end of each year written examinations test the student's knowledge, and he must pass satisfactorily in a majority of the first-year studies before he can pass on to the second year's class. To those wishing to take the medical degree the first year is allowed in the medical school of the University, after passing the required entrance examination, and also in every other medical school in the land. The University degree, D.M.D. (*Dentariæ Medicinæ Doctor*), is conferred upon all who fulfill the requirements. The diploma is accepted by the English Board of Registration under the new Dental Act, so that graduates of this school can practice dentistry in Great Britain without further examination. Graduates of recognized dental schools will be admitted to the courses of operative and mechanical dentistry on payment of \$50 each, or \$100 for both, for the whole or any portion of the academic year.

There are no fees for matriculation, nor for the diploma, nor for the demonstrators. For the first year a student is a member of the school the fee is \$200, payable in two installments of \$120 and \$80; for the second year, \$150, in two payments of \$100 and \$50; for any subsequent year, \$50.

Students find their own instruments, except such as properly belong to every well-furnished laboratory and infirmary.

The following are the text-books, but the student is not obliged to purchase them all, as about half of them are books of reference: Gray's or Quain's "Anatomy;" Holden's "Osteology;" Dalton's (sixth edition) or Foster's "Physiology;" Bloxam's "Chemistry, Organic and Inorganic;" Clowes' "Qualitative Analysis;" Bryant's "Surgery;" Billroth's "Surgical Pathology;" Taft's "Operative Dentistry;" Richardson's "Mechanical Dentistry;" Harris' "Prin-

ciples and Practice;" Wedl's "Pathology of the Teeth;" Tome's "Dental Surgery;" Garretson's "Oral Surgery;" Dunglison's "Medical Dictionary;" Carpenter's "Principles of Human Physiology," and Kingsley's "Oral Deformities."

For further information address Dr. THOS. H. CHANDLER, Dean, 74 Commonwealth avenue, Boston, Mass.

UNIVERSITY OF PENNSYLVANIA—DEPARTMENT OF DENTISTRY,  
FOUNDED 1878.

*Outline of Course*—Operative dentistry, dental histology, dental pathology, mechanical dentistry, metallurgy, chemistry, general, special and topographical anatomy, physiology, materia medica and therapeutics.

*Expenses*—First year, \$105; second year, \$140, including graduating fee. Additional expenses incurred by the second-year dental students who take the second course of medicine, \$45.

*Text-books and Works of Reference*—On Operative Dentistry and Dental Histology: Harris' "Principles and Practice;" Tome's "Dental Surgery;" Taft's "Operative Dentistry;" Tome's "Dental Anatomy." On Mechanical Dentistry and Metallurgy: Richardson's "Mechanical Dentistry;" Wildman's "Instructions in Vulcanite Work;" Kingsley's "Oral Deformities." On Anatomy: Leidy's "Elementary Treatise on Human Anatomy;" Sharpey and Quain's "Anatomy;" Gray's "Anatomy;" Stricker's "Manual of Histology." On Chemistry: Fownes' or Wurtz's "Chemistry;" Wormley's "Micro-Chemistry of Poisons;" Clowes' "Analytical Chemistry." On Physiology: Foster's "Physiology," with Frey's "Compendium of Histology;" Tyson's "Cell Doctrine;" Carpenter's "Physiology," by Smith. On Materia Medica: H. C. Wood's "Therapeutics;" George B. Wood's "Therapeutics;" Wood and Bache's "Dispensatory." On Surgery: Agnew's "Surgery;" Ashhurst's "Surgery;" Billoth's "Surgical Pathology."

PHILADELPHIA DENTAL COLLEGE.

This institution considers in its curriculum the two-fold aspect of dentistry as a profession in itself, and oral surgery as a specialty in medicine. The number of its professors is six: three of these, aided by assistants, confine their attention strictly to matters connected with the teeth; three teach general medicine and surgery. The curriculum is common alike to all matriculates. Members of

the College studying for the degree of D.D.S. have their examination confined to dental subjects; those proposing to assume the duties of oral surgery are expected to continue at the school for a third year, and are required to pass an examination for the degree of M.D., and, still later, another conducted in the dissecting-room, when they are expected to demonstrate an ability to perform on the moment any operation pertaining to general surgery, and, this accomplished, every operation in oral surgery. From the dissecting-room the candidate passes to the clinical service, where, in presence of the class, he diagnoses various cases, and defends, against all objections made, the accuracy of the diagnosis. Such an examination satisfactorily passed, the certificate of the Hospital Department is conferred. This certificate has not, as yet, been taken by any student.

The dental course of the College is covered by two sessions of five months each, except in the case of graduates in medicine, or students who have attended one course in some other dental college, or of dental practitioners of five years' standing, one course alone being demanded of them. The yearly fee is \$100. The cost of outfit in Dental Department is \$20.

The text-books in dentistry are Garretson's "System of Oral Surgery," Richardson's "Mechanical Dentistry," and Harris' and Taft's "Dentistry." The works used in oral surgery are Garretson's "Oral Surgery," Agnew's or Gross' "System of Surgery," Miller's "Principles of Surgery," Gray's "Anatomy," Dalton's "Thymology," Fowne's "Chemistry," Reynold's "System of Medicine," and Williams' "Principles of Medicine," etc.

The College has established a preliminary reading course, designed to aid its students in preparing for a study of its curriculum. To join this class requires simply the taking out of the matriculation ticket. The present is its nineteenth course.

Further information may be obtained of the Dean, Dr. J. E. GARRETSON, 1537 Chestnut street, Philadelphia.

#### UNIVERSITY OF MICHIGAN—DENTAL DEPARTMENT.

The course of instruction is as under :

*First Year*—Anatomy, physiology, dissections, general chemistry, prosthetic dentistry, histology (in Physiological Laboratory).

*Second Year*—Review of the first year's study : clinical dentistry, theory and practice of dentistry, pathology, materia medica, analytical chemistry, metallurgy (special).



*Third Year*—Theory and practice of dentistry, clinical dentistry pathology, therapeutics, oral surgery, diseases of women and children.

To those who may find it necessary to complete their course in two years the following schedule of studies has been prepared :

*First Year*—Anatomy, physiology, dissections (during the holidays), general chemistry, analytical chemistry (at the end of the regular course), theory and practice of dentistry, prosthetic dentistry, principles of surgery, materia medica, histology (in Physiological Laboratory, at the end of the regular course).

*Second Year*—Anatomy, physiology, pathology, theory and practice of dentistry, clinical dentistry, oral surgery, therapeutics, diseases of women and children.

The text-books are as under : "Anatomy," Gray ; "Physiology," Dalton ; "Histology," Frey or Beale ; "Pathology," Wagner ; "Dental Pathology," Wedl ; "Oral Surgery," Garretson ; "Operative Dentistry," Taft ; "Prosthetic Dentistry," Richardson ; "Oral Deformities," Kingsley ; "Chemistry," Miller ; "Practical Chemistry," Prescott ; "Therapeutics," Biddle ; "Medical Dictionary," Dunglison ; "Dental Dictionary," Harris.

The following is a list of the fees : Matriculation (for residents of Michigan), \$10 ; for others, \$25. Incidental expenses (for residents of Michigan), \$20 ; others, \$25. Diploma, \$10. Students who pursue laboratory courses of study are also required to pay for the materials and apparatus consumed by them.

## OUR ENGLISH LETTER.

(FROM OUR OWN CORRESPONDENT).

LONDON, England, *June*.

THE authorities, whose function it is to protect the public against unqualified doctors and dentists in this country, are often what, in common parlance, would be called "badly mixed." Did my reader ever find himself called on to dispose of a heap of work concerning which he had but the barest knowledge ? Did he ever find himself, say, placed before a ledger and a journal which had been neglected for years or months, and told that he must straighten them ? Or did he ever find himself, in his days of lesser experience as a dentist, with a difficult case in hand, where his patient wanted some very

particular mechanical or operative work done in the mouth, and, for the life of him, he could not, when he had begun, tell how to do it ?

If my reader has found himself, at some time or times, in such a plight, he can appreciate somewhat the feeling of the General Medical Council of England. This body has certain powers and functions, which I need not enumerate here, that has found the question of the rights and privileges of dentistry a great thorn in its side of late. Acts of Parliament are proverbially amenable to the twistings of lawyers and other sharp-nosed men. A carriage-and-six can be drawn through them, be they never so intelligently and properly framed. The Medical Council, as I stated in my last letter, have had no end of trouble in ascertaining what the Dental Act really does mean, and have had no end of acute legal men to explain to them this clause and that.

The Medical Council seem to be very inapt at ascertaining just how the pulse beats of the dentists of the country. They thought to exclude from the Dentists' Register all titles other than those which definitely state a qualification in dentistry. Now, there are some eminent dentists who are members of the Royal College of Surgeons of England, and they think it a great hardship that they should not have the letters M.R.C.S. entered on the Register. There is some little ground for this complaint. It must be remembered that M.R.C.S. is not a mere honorary, sounding title, given to a man to please him and gratify his vanity. No ; it means that the holder of the title has surgical knowledge and education of the highest value to a dentist. It means that a man who affixes these letters to his name is, other things being equal, better able to treat oral defects than one without them.

There has been a kicking of certain gentlemen who are members of the Royal College of Surgeons against the rule that a man could not have the letters M.R.C.S. added to his name on the Dentists' Register. There is no doubt that these gentlemen were right in their claims. If a dentist, not satisfied with having passed his examination for a license to practice dentistry, goes further and becomes a member of the College of Surgeons, he holds qualifications of a higher kind than a mere licentiate in dental surgery. If he holds these higher qualifications, why should not his name as it appears on the Dentists' Register attest that fact ?

But after all, though personally I sympathize with the members of the College of Surgeons in their claims, I must admit that there is

another side to the question. The object of the Dentists' Register is this—to afford to the public a complete list of the duly-qualified dentists in the country. It is nothing more than that. The law of the land places the standard of education required of a dentist at a certain point. If he goes to that point he is a licentiate of dental surgery. If he chooses to go beyond that point, that is his own affair, and he is to be commended. But the Register is not intended to act as an advertisement for extra studious men. Its prime object is not to give some men a chance to stand out on its pages with a longer series of letters affixed to their names than others. If Dr. Tomes or others choose to spend twice as much time in study as is necessary to qualify them for a place on the Dentists' Register, everybody who knows it will so much the more respect Dr. Tomes' erudition and skill. They will so much the more go to him for treatment if they need it and if they can pay his price. But is the Dentists' Register the place for him to parade his M.R.C.S.? Should he not be content to put them on his door-plate, on the plate on his gate (if he has one) in front of his house, on his cards, to his signature when writing to the newspapers, and on the title-pages of the valuable books he writes? I ask—Should he not be content with this? I do not reply in the affirmative, though some do.

If the privilege of registering extra surgical qualifications is granted, why not medical qualifications too? Surely medicine has as much to do with dentistry as surgery has. The Medical Act recognizes the fact that there are sixty-two different titles that a man may acquire. Now, if a dentist gets all these, and chooses to have his door-plate made large enough to put them all on, why, no one will complain. The engraver and the plate-maker will be the better off. But to affix them all to his name on the Dentists' Register would be, to say the least, not a little inconvenient.

It appears that only about one in twenty of the licentiates of dentistry have applied to be allowed to add their additional qualifications to their names on the Register. The objection made by some gentlemen is, that if this one in twenty be allowed to so register, the jealousy of the remaining nineteen will be excited. This suggestion is sheer nonsense. A Bachelor of Arts might as well be jealous of a Master of Arts, or a man who has only matriculated of them both. The inferior man knows that the door of distinction is as wide open to him as to his fellows. All he has to do is to secure the necessary passport—which is learning—and walk in. So it would be with the

dentists. The man with a plain L.D.S. after his name would know that he might become an M.R.C.S., too, if he desired it, and if he is prepared to give sufficient study to surgery.

There is a wider view of the case to be taken, and it is on this wider view that I take my stand in favor of the dentist who is an M.R.C.S. being allowed to add his title to his name on the Dentists' Register. We need to keep in mind more than we do the wealth of wisdom and unselfishness suggested by the old Latin phrase, *pro bono publico*. The public does not exist for the dentists—rather do the dentists exist for the public. Only in so far as dentists are a part of the public does the public exist for them. Such being the case, the public has a right to know what are the qualifications of a man. If a man needs dental services, and he desires and is prepared to pay a man of large experience, he ought to be able to go to the Dentists' Register and pick that man out. A man who is educated to treat one part of the body is not so good a judge of what to do as he who is educated to treat all parts.

It must be remembered, that if the privilege be accorded to members of the Royal College of Surgeons to affix M.R.C.S. to their names, it will stimulate other dentists to secure also a greater distinction than merely the L.D.S.—licentiate of dental surgery. It is in this that I see much good will result to the public. A higher standard of education will be the result. I am very glad that the Medical Council have given way to the solicitations of such men as Dr. Tomes, who felt that they were entitled to have their full titles recorded on the Register. The objections raised to it were at the best but weak when compared with the strength of the argument in favor of the change.

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## DR. COGSWELL'S REPLY TO DR. McLAIN.

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### EDITOR OF JOHNSTONS' DENTAL MISCELLANY:

ALLOW me to thank you for your friendly position toward the enterprise on this coast that bears my name. As Dr. McLain has seen fit to trouble you with his views, it is clearly a duty I owe to myself and the profession to correct his statements.

I believe I have the welfare of the dental profession at heart. I knew of no better way I could show my regard for it than by assisting them in the endowment of a Dental College. I certainly did want to perpetuate my name as a real friend of dentists and dental



education, and to this end I gave the dental profession on this coast some property, valued by others at about \$20,000, as a foundation for a Dental College. I was quite sure that affiliating the Dental College with the State University would be the best conditions I could place it under, and the Regents of the State University the best custodians of the property. In making a deed of trust I put in it only those conditions that I believed were best for the dentists and their school.

The Regents accepted the trust and appointed Drs. W. S. Dennis and R. F. McLain as professors. The Professors said that about three thousand dollars were needed to buy apparatus. I told them and the students that I had given all I thought it my duty to give, having been out of practice more than a quarter of a century, and that I wanted the dentists to take some stock in their own school; and, if the dentists on this coast could not raise three thousand or four thousand dollars to put their College in operation, I would doubt their ability to manage one if the money was furnished. I regarded it as the duty of the Professors-elect to lay this matter before the profession, and, as this property was for the dentists alone, invite all of them to join in raising the few thousand dollars needed to put it in working condition. I am quite sure, and so are many of my dental friends on this coast, that had the Professors-elect, Drs. Dennis and McLain, made any reasonable effort in this way, the profession would gladly have helped to raise the needed funds. I also offered to give five hundred dollars more, provided the College was opened by January, 1881, as a contingent fund, to be used as the faculty might unanimously agree. (See my proposition in October, 1880, *Jairus*.)

But, instead of the Professors-elect doing anything to help the enterprise or lay the matter before the dentists so they could help their own school, both Drs. Dennis and McLain, and their friend Dr. Dunbar (see his letter in *Jairus*, November, 1880), commenced abusing me and my donation to the dentists, and complaining of the "onerous restrictions and conditions detrimental to its success." Dr. Dennis' letter to me, published in the October (1880) *Jairus*, is abuse from beginning to end, because my gift was not worth more, and because I did not give, in addition, the three thousand dollars needed to start it.

Your readers know what Dr. McLain says in the April MISCELLANY in his letter on the Cogswell College. His words are: "Now

this all-embarrassing obstacle—the want of funds—to the early and successful operation of this College would soon be overcome if Dr. Cogswell would simply remove some of the restrictions he has placed on the bequest." This seems a reasonable demand at first look. But see what he means by it when he adds, "He (myself) might, in the first place, give the entire property to the cause of dental education, abrogate the chair of Moral Philosophy, etc." This means I ought to give to Drs. McLain and Dennis to start this School about fifty thousand dollars' worth of property that *I do not own*. What do you think of any sane man making such a proposition? Dr. McLain tells you there is no variance among the dentists on this matter, and none of them are making war on me. Perhaps he and I may not mean the same by these terms. They are not making war on me personally as armies do on each other; but if finding fault with my donation and me for giving it, and so blockading and obstructing this College matter that nothing can be done by others to give it life is making war, then the Professors-elect are certainly making war to the fullest extent. I have not the least doubt but that the surly dog in the manger would have claimed that he was not making war on the ox. Perhaps he thought that there was no variance between them, but we think the ox held a different view. Which was right?

Drs. Dennis and McLain had this College matter so in their hands that it was in their power to make it a success or failure. So far they have been very successful in making it a failure. And now they misrepresent me by telling the profession at large that the fault is mine, because after giving about \$20,000 freely and voluntarily—all that it was my duty to give—I don't give from \$30,000 to \$50,000 more. As I have said before, what I have given seems to be so much premium paid for personal abuse. My object and motives have been to benefit the cause of dental education—to show my regard for the profession of my younger days. My wife joined me in this token of our regard to the dental profession. Our life has been busy and economical. Now, in our old age, we have a little to give away, and we are trying to bestow it where it will do the most good. We both feel keenly the unkind criticism that so far has been the only return we have received from the dentists for giving all we regarded it as our duty to give to the cause of dental education. If the dental profession of California do not want this, we will not force it upon them, but it forces on us the duty of changing

the donation we gave to found a Dental College to some other purpose where it is more needed and will be better appreciated.

H. D. COGSWELL.

SAN FRANCISCO, *May 25th*, 1881.

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## DENTAL SOCIETY OF THE STATE OF NEW YORK.

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THE following is a continuation of our report of the meetings of the above Society, held at Albany, May 11th and 12th:

### CASES IN OFFICE PRACTICE.

DR. ALLEN reported a case of the first molar on the right side of the lower jaw which was decayed near the edge of the gum. The patient was a young lady of twenty years of age. The cavity was a large one, and very sensitive. It did not, however, seem more sensitive than many he had filled before. He treated it thoroughly, and filled it with gold. After the operation the lady experienced a great deal of pain from it, and in a week he (the Doctor) took out the filling. It was very difficult to get out, and pained the patient very much. The tooth seemed to be exceedingly sensitive. It was then treated with oil of cloves for a little while, and filled with gutta-percha. It immediately began to get better, and in a few days was well.

DR. C. A. MARVIN said that a case was suggested to him by Dr. Allen's remarks: About two years ago a lady in Brooklyn came to him, and, among the rest of her teeth which required filling, was the left superior second bicuspid. There was no exposure of pulp, and everything about it looked nicely. The rubber dam was put on, and the tooth filled. He then took a little piece of very soft spunk and wiped out the cavity. This caused the patient very acute pain, and the aching continued for several minutes with great severity. He saw no reason why the tooth should ache, and washed it out with creosote, and made up his mind that the tooth had no business to ache. He then filled it very carefully, and there has been no pain in it since.

DR. ATKINSON said he was astonished that more such cases as those just reported had not been seen and understood. The power to irritate possessed by dry spunk is very great. He had seen just such pain follow its use in small marginal cavities. Hence he had discarded its use for drying cavities. It absorbs the liquid contents of the end of the tubuli to such an extent as to cause pain.

Dr. TENISON said he had experienced the same trouble when he used spunk, but he had left off using it now.

#### COMMON SENSE IN DENTAL PRACTICE.

The following is an abstract of an essay read by Dr. C. A. MARVIN on the above subject:

Common sense is a most valuable factor in dental practice. The extremely fanciful and excessively scientific character of dental literature and discussions of to-day would almost justify the criticism that dentistry is liable to drift away into unsafe waters. Common sense is no enemy to science, but it is a break on reckless dash, on quackery and airy frauds. It is a testing principle of new theories. It is a valuable thing to possess, and he who holds it in active exercise has an acquisition of no little value.

Is it an uncommon possession? No, but it is so unobtrusive as to be easily overlooked and eclipsed by the flash of meteoric genius. Science is valuable, but the imitation, though veiled in scientific terms, is worthless. Is not science justified in speaking in its own language? Certainly; but it is necessary that there be something behind the terms. Is science to be ignored in dental practice? No, for it lies at the foundation of all correct practice.

What do we mean by common sense? Common sense is the innate faculty which perceives the natural fitness of things. It is not necessarily the product of education. It regards words as conveyors of ideas, and regards the ideas as far more valuable. The easiest way of transmitting an idea is the most acceptable to common sense. Elegance of diction appeals to another quality of the mind which is the friend of culture—intellectual taste. While taste is being regaled by sonorous phrases, common sense sits like a judge, watching the golden thoughts among the verbiage.

Common sense looks to the building up of reputation by merit, and holds that a more lasting name will follow success in achievements than brilliance of methods. The term "science" charms many men by its mystery. This is not the forte of science. She cannot supply demonstration and the ability to perceive it. She cannot prevent men from being diverted from the end by the means. There is much that is called science in the world which is not science. It bears the same relation to true science that the baser metal does to the genuine coin. People are deceived by it. This is because the superficial qualities attract the attention, so that the absence of real worth is unnoticed.



The ideas thus far advanced, while applicable to every sphere of labor, bear a particularly appropriate relation to the theory and practice of dentistry. Let me give here a few simple rules for our guidance which are, I think, in accord with the dictates of common sense. First—call things by their names. Second—have an idea. Third—express that idea in the shortest and clearest manner. Fourth—never lose sight of the idea till it is expressed. Fifth—have an end in view when you practice. Sixth—be able to state it if asked. Seventh—have a reason for every method you employ. Eighth—let the reason be one which an intelligent patient can comprehend. Ninth—pursue no circuitous modes of expression, unless direct modes will not meet the case. Tenth—keep before your mind some primal thought.

All the questions suggested in these ten rules cannot be considered in this paper, but enough can be selected from them. The habit of employing high-sounding terms is too common. Unless indispensable to the expression of a clear idea, it is not wisdom. An intelligent patient can easily distinguish between the necessary and useless employment of big terms. One part of the dentist's mission is to instruct people with whom he may come in contact, that they may realize the importance of caring for their teeth, that they may value dental service, and discriminate between skillful and unskillful treatment. In order to secure so desirable an end, it is requisite that people with whom dentists talk shall understand what they say. It follows that there must be ideas behind the words. Call things by their right names: use such words as are intelligible to the listener. If they cannot understand the words, explain them. This is common sense. An expression of the countenance betrays the satisfaction which the enlightened patient displays.

In pursuing a line of thought, new and lateral ideas are continually presenting themselves, and it is no easy matter to avoid turning away in these side directions. This is not consistent if the chief idea suffers thereby. The central thought should be plainly set forth and then stated, and lateral ideas, if pertinent, may then be introduced. When attempting to impart an important idea, neither the difficulty of framing it nor the obtuseness of perception of the hearer should be allowed to obstruct our view or allow us to forget the idea. These thoughts apply to the practice of dentistry as well as to the expression of ideas.

Science means known facts that have been proved, or are capable of proof, by logical reasoning or practical experience, or both. Science maintains no opposition to common sense. An enlightened common sense is very valuable in preventing a man from being led into false conclusions. There is a fascination in working out what are called scientific problems and coming to scientific conclusions.

Have an end in view when you practice. The field opened is vast. To grasp a carious tooth with one hand and to cut at it with another is to work at random. Possibly a fair result may be obtained—probably not. A plan should be formed first and then you should work to the conclusion. If, in a case of disease in the oral cavity, a dentist applies one or two remedies, hoping that one or the other may afford relief, he is in danger of employing an agent that will increase the irritation. So, very often, unnecessary and prolonged suffering is caused the patient.

In all departments of dentistry the exercise of an enlightened common sense is a great safeguard. It is the governor of the engine, regulating its motion—not decreasing its power. In the mechanical department of dentistry great mistakes may be made by taking no heed to the demands of this faculty. It may be said that there are regions of thought so sublime that the common mental faculty cannot appreciate it—that nothing but a mind trained in scientific knowledge is capable of grasping it. That is, in a sense, true, and here is where an enlightened, an educated common sense comes in as a safeguard to the highly-trained mind.

Scientific knowledge is very valuable. An understanding of the elements of the component parts of the body is valuable. We cannot have too much of it. The ability to diagnose disease and to supply lost power is a great possession. \* But underlying all, pervading all, imbuing all, is the quiet, watchful, trustworthy faculty—an enlightened common sense.

#### DISCUSSION.

Dr. ATKINSON said that if common sense were the uniform possession of every one of us, then there would be no progress. He had been impressed, through the reading of the paper, by some sort of power of receptivity, call it common sense or what they pleased, that the underthought of the entire production was the offspring of an error. That thought seemed to be that we can know something outside of mathematics, of a fixed science—in other

words, that the science of physiology, pathology or therapeutics is something that requires no previous revelation of truth to interpret it, but the immediate inspiration to come to a conclusion which is satisfactory to common sense. The whole matter would be well characterized by watching a painter who went through the slums of deformity to get the elements of a picture he wishes to paint, and he (the speaker) had been forced to allow the inquiry to force itself on his mind—Where in the name of Heaven has Dr. Marvin been to have such perceptions enter the pale of his common sense? If he (Dr. Atkinson) were to put out all the deformity of blatant ignorance that he ever witnessed, he could not set up a more abominable, disgusting figure than Dr. Marvin had presented, against which common sense should be exercised, and without, so far as he had been able to catch, giving one guiding word.

Dr. MARVIN briefly replied to Dr. Atkinson's criticism. He called on any one to disprove that there is a faculty in us called common sense. Every man before him, when he has to judge of philosophy or science, measures it by his common sense. If a man does that, he is safe. If he does not, he is unsafe. He did not believe in taking as truth the *dicta* of any man unless it appeals to something which is in him that is capable of detecting truth and error. He had given a definition of common sense, and if Dr. Atkinson did not like it he need not accept it.

*(To be continued.)*

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## ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

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### ORDINARY MONTHLY MEETING, MAY 2D, 1881.

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THOMAS A. ROGERS, Esq., President, in the chair.

The SECRETARY showed, for Mr. Brunton, of Leeds, a left lower molar having lingual and labial, instead of anterior and posterior, roots. Mr. Brunton had not been able to find any mention of such an abnormality in any of the books which he had been able to consult.

The SECRETARY also, for Mr. J. Fenn Coles, of Ipswich, a bicuspid which showed the destructive effects caused by a gold clasp, an upper second molar showing absorption of roots caused by pressure of third molar, and an abnormally-developed left upper central.

Mr. HENRY SEWILL said that when he brought forward his case

of paralysis of the inferior dental nerve, at the last meeting, he had not paid much attention to the anatomical relations between it and the third molar. Since then he had investigated the subject a little by filing away the inner table of the first lower jaw that came to hand, and he found that the inferior dental nerve did pass very close to the roots of the wisdom tooth, much closer than he had previously any idea of. It would be evident to those who would inspect the specimen that there must necessarily be some danger, in extracting the wisdom tooth, of forcing in the roof to the inferior dental canal. He was sorry to have to add that his patient had not as yet showed any signs of improvement.

He wished also to exhibit models of two typical cases of a very curious and interesting disease, the pathology of which was, so far as he knew, still quite undecided; he referred to the outgrowth of the upper central incisors. It appeared to occur only in women, and was not noticeable before the age of twenty-five. The teeth then gradually began to elongate and protrude, but did not become loose until a very late stage of the disease. There was no discharge, no visible inflammation, no wasting of the alveoli, no similar disease of the other teeth. It was apparently due to extremely chronic inflammation of the sockets with formation of fibrous tissue which forced out the tooth, and in process of time the inconvenience and deformity became so great that the teeth had to be extracted and replaced by substitutes.

He should be glad to know if any of those present could throw any light on the etiology and pathology of this remarkable disease; and also whether any one could suggest any other treatment than that which he had just mentioned, viz., the extraction of the teeth and the fitting of artificial substitutes.

By way of contrast, he would hand round also a model of the mouth of a girl only eighteen years of age, showing protrusion of the incisors *with wasting of the alveoli*. This was quite a distinct disease, and one which was much more frequently met with, though it was rare to see it in so young a patient.

For one of the cases first exhibited he was indebted to Mr. Whatford, of Newcastle-on-Tyne.

Mr. DENNANT remarked that the state of things shown by one of the models was just that which might occur in cases in which the habit of thumb-sucking had been continued up to a late age. Had Mr. Sewill inquired into this as a possible cause?



Mr. PARSONS inquired whether the under lip caught under the upper teeth.

Mr. HUNT said he had met with one very marked example of this disease in a lady about sixty years of age, whose upper incisors and canines protruded almost horizontally outward; the change commenced when she was about twenty. Mr. Hunt extracted the projecting teeth and fitted artificial ones.

In some of these cases the change was due to Riggs' disease, and then the application of a strong solution of carbolic acid or chloride of zinc would gradually arrest the disease for a time, but, so far as his experience went, it always returned, sooner or later, and the teeth had to be extracted.

The PRESIDENT said he had found acetic acid a useful application in such cases.

Mr. SEWILL replied that as the disease never made its appearance until the patient was about twenty-five years of age, it could scarcely be due to thumb-sucking. In both of these cases the upper teeth were quite clear of the under, and they only passed over the under lip at a late stage of the disease, so that the altered direction of the teeth was not due to the effect of pressure upon the crowns. This affection was quite distinct from the so-called Riggs' disease; there was no discharge from the gums or alveoli, and, in fact, no sign whatever of any active disease.

Mr. GADDES then read the following communication from Mr. J. R. Gurner, L.D.S. Eng., of Adelaide, South Australia:

The following successful case of nerve-stretching, the first of the kind in this colony, was under the care of Dr. Chas. Gosse, of this city. Knowing that I felt a great interest in the case, he very kindly gave me the opportunity of being present at the operation, and subsequently, at my request, supplied me with a copy of his notes, which I here append:

Louisa F., a German, married, has had seven children, five alive and well; is a healthy-looking woman, with an anxious countenance; ten years ago she had erysipelas of the face, but with this exception has had excellent health, until six years ago, when she first complained of pain in the left cheek and lip, which has gradually increased in intensity from year to year. The pain seems to be aggravated by exposure to the wind, especially when driving, and also by eating or drinking. If the tip of the finger is gently passed along the edge of the lip on the left side, she starts

from her chair as if she had received a shock from a galvanic battery ; on pressing the cheek, the pain is very severe, but not of the same character. For the last month she had been unable to take any solid food, and even hot or cold drinks are dreaded.

On examining the mouth I found a number of decayed stumps, and advised a visit to my friend, Mr. Gurner, who removed them, but with no permanent relief to the pain. In five days her suffering was as great as ever, and I therefore recommended an operation, to which she readily assented. She had so much pain the night before the operation that her friends could hear her screams all over the house.

On February 12th, 1881, I cut down upon the infra-orbital foramen, and seized the nerve as it passes on to the cheek on an aneurism needle. I thoroughly stretched the nerve in all directions, finally leaving it quite loose in the wound. I united the edges with horsehair sutures, and the wound healed by first intention. On February 15th she had some pain, which slightly increased up to the 20th, after which date she gradually improved and lost all pain. She could eat solids and drink hot or cold liquids with ease and comfort.

On March 12th, when I last saw her, her appearance had greatly changed ; she looked happy, and expressed herself quite free from pain. She left town next day for her home in the country, some two hundred miles away.

I would remark that nothing could be felt on examining the cheek externally, nor was there anything abnormal about the nerve when exposed to view. The slight pain which she experienced for the first few days after the operation I attribute to the irritation which the latter set up.

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#### SOUTHERN DENTAL ASSOCIATION.

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THE Thirteenth Annual Meeting of this body will take place at Asheville, N. C., in connection with the North Carolina Dental Association, on Tuesday, July 26th, 1881.

The fact of the two societies meeting together will greatly enhance the interest of the meeting and increase the number in attendance. The Committee of Arrangements have prepared an excellent programme. Arrangements have been made with the hotels and railroads for reduced rates.

E. G. CHISHOLM, *Recording Secretary.*

### FIRST DISTRICT DENTAL SOCIETY (NEW YORK).

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At a meeting of this Society on June 7th a committee was appointed to express the sentiments of the Society in regard to the death of Dr. E. G. Roy, who prepared the following for publication and also to be presented to the family: It is with feelings of unfeigned regret that we announce the death on May 20th, 1881, of our esteemed member and co-worker, Dr. Enos G. Roy, whose death was caused by an attack of spinal meningitis following an illness of malarial fever.

Dr. Roy was fifty years of age, had been in practice twenty-nine years in this city, was one of the incorporators of the New York College of Dentistry, received the diploma of the Pennsylvania Dental College in 1867, and for some time had held the office of Librarian of the Odontological Society of this city, and was formerly Treasurer of that and likewise of this Society.

Dr. Roy had many characteristics which were calculated to make him successful in the profession. Kind-hearted, faithful and conscientious, he could always be depended upon—a fact which his extensive practice fully demonstrated.

It is especially gratifying to be able to say of Dr. Roy, that whatever duties or responsibilities were undertaken by him in society work were most faithfully performed to the entire satisfaction of all.

He was, indeed, an exemplary Christian gentleman, whose many virtues it would be well for us all to imitate.

W. H. ATKINSON, *President.*

G. W. WELD, *Secretary.*

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### NATIONAL DENTAL ASSOCIATION.

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THE regular Annual Meeting of the Dental Association of the United States of America will be held in New York City, commencing Monday, August 8th, 1881. This Association was organized, not in opposition to those already existing, but to supply a want that is not met by any one of them. It is so constituted that members of the profession in all parts of the country can in turn attend the meetings and participate in its control and its benefits. All members of the profession are therefore cordially invited to attend this meeting.

R. FINLEY HUNT, *Secretary,*

WASHINGTON, D. C.

## EDITORIAL NOTES.

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THE GOODYEAR PATENT.

ALL our readers will be pleased to be assured that the Goodyear Company do not intend to make an attempt to extend their patents on dental vulcanite. This we state authoritatively, having had a communication from them to that effect. We need not at this time do more than state the fact. The pleasure we derive from being able to do this without fear of contradiction somewhat unfits us for writing so harshly concerning the corporation as we might otherwise be inclined to do. For months past speculation and conjectures have been afloat as to whether or not the Company intended to make another attempt to clutch the dental profession. The fact that no move on their part was discernible appeared to justify us in coming to the conclusion that they had decided to allow the patent to lapse. But, on the other hand, dentists thought that such a course was hardly possible. The action of the Company in the past had been so grasping that it seemed to be contrary to their nature to allow even the possibility of success in a renewal of their patent to pass them without seizing at it. Their last step, however, has been better than we judged, from their traditions, they were capable of. Now all we can do is to join in the general congratulation.

## A HINT TO OUR DENTAL SOCIETIES.

THE officers of many of our dental societies, as well as the members, have yet to awake to their duty to their neighbors. We have to complain of a rule, common to some of them, concerning which we can express our disapproval without in any sense being personal and without incurring the ill-will or hard thoughts of any one. Many of our societies number in their ranks men who possess freshness of ideas, richness of experience and facility of expression, whose thoughts are prohibited, by means of a local protection law, from becoming common property. These men read papers at the meetings of their society, which are then seized and laid in the pigeon-holes of the Publication Committee, where they rest for months or years. Then, after they have become well-seasoned with age, they are drawn forth, and a hundred or two copies printed and distributed among the members.

Very probably a week or so after the meeting of the society some



enterprising editor of a dental journal writes to the Secretary asking for such and such a paper for publication. His reply is a postal-card saying that the committee has decided to publish the proceedings in book form, after which the editor will be at liberty to publish what he deems of sufficient interest to his readers. Now, this concession is a very great one, undoubtedly, but the editor fails to see that it is such. He wants matter for his journal to be fresh. He has an instinctive dislike for manuscript that smells of pigeon-holes. He has the idea that an article is best when it is warm with the lately-expelled thought of the writer. Suppose the article deals with the subject of anæsthetics, or anything else on which additional light is gradually being obtained. For him to publish a paper written twelve or twenty-four months ago might be a wrong to the writer, an injustice to the reader, and a proof of the fact that the editor himself was not fit for his business.

We speak thus plainly, not for ourselves merely, or for the journal we have the honor to conduct. We are wider in our sympathies, and speak for the dentists at large. Is it better for a society to keep to itself the cream of the thought of its best members, or to send it to some largely-circulating journal, where it will secure thousands of readers? Let us say that many societies which adopt this selfish plan are doing more harm than they dream of. We have heard men remark, "I am not going to prepare a paper for the society I belong to. I should spend weeks over it, and then have the honor of reading it to a score of men in thirty minutes. My paper would then be hustled into the secret archives of the Secretary's office, and it would be seen no more of till two or three years after, more or less. There is a law of the society which says that all papers read before it becomes its property. So I have to give my paper up. The game is not worth the candle."

Such, in truth, is the verdict of many men we have met. Is it not clear that stupid rules lay an embargo on some of the best of writing? To us it is perfectly clear. There are societies which have risen above this short-sightedness. To them much honor is due. We trust that other societies will follow their footsteps. Dentistry is not a profession of localities—its function is not to form a number of petty exclusive societies, all bent on keeping to itself every thought it gives birth to that is worth having. Dentistry is a profession wide as the seas, and the dentists of Maine should entertain as strong a feeling of *esprit de corps* toward those who live in Califor-

nia as do the dwellers of the north side of a New York City street with those living on the south side.

#### CIVILIZATION AND THE TEETH.

One of the most intelligent and thoughtful essays we ever remember perusing on civilization and its relation to the decay of the teeth was read by Dr. N. W. Kingsley before the Dental Society of the State of New York at Albany at their late meeting. We publish in this number of the MISCELLANY an abstract of this essay. Some of the pet theories of individuals get a vigorous shaking up from the Doctor. The broad shoulders of civilization are relieved of the allegation that it is to be blamed for the troubles of the teeth from which an advancing humanity suffers. The teeth decay primarily, says Dr. Kingsley, because the nutrition of their organic structure being obstructed, retrograde metamorphosis ensues. Civilization is not to be blamed for decaying teeth. Rather are those to blame who abuse the advantages which civilization brings. Dr. Kingsley predicts that out of civilization will yet come the grandest examples of humanity the world has ever seen—men without spot or blemish or taint of disease. It is very cheering to entertain such a thought, but where is the beginning of this end? Retrogression is the order of the day in the mouths of the most highly-civilized people. This much Dr. Kingsley admits in the first part of his paper. When will the tide turn? What can we do to aid in the turning of the tide?

#### BROWN BREAD AND THE TEETH.

Dr. Kingsley, in his essay referred to above, deals a side hit at the advocates of brown bread—those who say that it is one of the panaceas for the ills to which flesh is heir, one of which ills is a carious tooth. It is true he does not deal unbolted flour a full, staggering blow. In fact, he says that it possesses more elements which go to make up tooth structure than white bread. But he goes on to say that man does not live by bread alone, that it forms but a small part of his bill of fare, and consequently it has not a chance, if it could, to build up his teeth. Just here is where the theory of the advocates of brown bread comes in. They deplore the fact that our bills of fare are so extensive and varied. If we would only believe that civilization and plain food could go together, that civilization does not absolutely demand so great a variety, and such extraordinary toothsome concoctions as French cooks alone know how to get up, we should enjoy much better

health. In so far as our digestive apparatus is disordered by loading it with indigestible food our teeth suffer with it. The fact is, one part of the system cannot be out of sympathy long with another. And just so, in so far as the digestive organs are maintained in a healthy condition by the use of plainer food such as brown bread, the teeth and all the other organs of the body, being in sympathy with the stomach, gain thereby.

#### WHAT IS COMMON SENSE?

Dr. C. A. Marvin and some of the members of the Dental Society of the State of New York have been struggling with this ponderous query, and we hardly think they have been very successful in answering it. The Doctor seems to have set up a new definition of the term, though we do not exactly see what he designates as common sense, after all. Let us say that this subtle possession is not called "common" because it exists everywhere, more or less, or because it is common to every one. It is so-called because it is a sense which is common to all the five senses. By some ancients it was supposed to be located at the point where the five senses meet—in other words, the seat of the soul—where it judges by what is presented by the senses and decides the mode of action. Dr. Marvin is entirely wrong when he maintains that common sense has anything whatever to do in deciding whether to accept and adopt or reject some scientific theory. Common sense is not the brake on reckless dash, or airy frauds. That which acts as a brake on these troublesome things is—judgment which has been tutored by experience. Let us illustrate. A man comes to us with the plan of a motor of some kind which he says will drive a dental engine. But one peculiar feature about it is, says the inventor, that it will, by an occult manipulation of the machinery, produce more force than is put into it. In other words (if it is a water motor), it will receive into itself power to raise twenty foot pounds per minute, but, by means of a long pipe or a short pipe, a big wheel or a little wheel, it is going to make that water raise thirty foot pounds before it is done with. Now, men with such ideas are very plentiful. Witness the scare caused by the Keely motor, which wonderful machine is going to drag a train from New York to San Francisco with no other force than is obtained from a thimbleful of water. Now, what is it which impels us to reject these airy frauds? What, on the other hand, is it which

impels us to believe that electricity will one day almost, if not quite, entirely supersede steam as a motive power? What has common sense to do with it? Dr. Marvin says it has all to do with it? We fail to see that a union of the senses of hearing, feeling, tasting, seeing and smelling enables us to come to an intelligible opinion on these matters. No; we decide against the motor because we have had it mathematically demonstrated to us that you cannot get something out of nothing in these days; that force cannot be produced unless you have that which contains the force to produce it from. On the other hand, we believe in the future of electricity as a motive power, because we have seen what it has done in the past. The men who produce electric force are not fools enough to think that they can create power. They can only develop it. Common sense has nothing to do with teaching them this. It is their judgment—a judgment tutored by education—which is only secondarily a judgment of the senses.

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#### PROFESSOR MAYR'S CRITIC.

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IN the June number of the MISCELLANY we published a letter from Mr. Fletcher, of Warrington, England, criticising Professor Mayr's article dealing with the chemical and physical effects of fillings upon teeth, which appeared in our April issue. The *British Journal of Dental Science* published Professor Mayr's article from our pages in May, and in the number of that journal for June 1st Mr. Fletcher has a communication in which he lashes the Professor unmercifully. If our readers will turn to the June MISCELLANY they will find, practically, all that Mr. Fletcher says in the *British Journal of Dental Science*, except some rather severe remarks against Professor Mayr for his temerity.

In Professor Mayr's article (pages 125, 126) is the following: "By a filling like gold, which conducts two-thirds as well as the best conducting metal known—silver—we can bring the changes to tissues not only not accustomed to them, but even not at all prepared by slow increase. In nearly all such cases the change is sudden and great. Suppose a cavity of a depth of five millimètres (one-fifth of an inch) filled with gold. The person has been eating, say, an oyster stew of 130 degs. Fah.—the common temperature we like in such kind of broth. The gold filling carried the difference between the temperature of the broth and that of the mouth ( $130 - 98 = 32$  degs.



Fah.) almost undiminished to the bottom of the cavity. The cavity around the gold filling has assumed the temperature of 128 degs. Fah. Now the person feels warm, and of course (?) drinks ice-water of 32 degs. Fah. \* \* \* Few persons would even escape a rheumatism in case the hand should be subjected to such changes. Now, what does such a derangement mean in a tooth? It means disease of the protoplasma fibres, interruption of the circulation—necrosis—precisely what dentists observe.”

Mr. Fletcher replies to this in the following: “If Dr. Mayr eats ‘oyster stew at a temperature of 130 degs. Fah.,’ getting it carefully in contact with his gold fillings, and then ‘within six seconds drinks ice-water at 32 degs. Fah.,’ getting this also carefully in contact with his gold fillings, one can only regret his want of common sense and consideration for his own feelings. His example is not likely to be followed generally.”

Mr. Fletcher shows his ignorance of our glorious American customs when he wrote the last sentence in the above paragraph. Professor Mayr knew that a transition from 130-degree stew to 32-degree water is very general in this country, though in England oyster stew and ice-water are comparative rarities.

Professor Mayr's critic winds up his article in the *British Journal* as follows: “When a writer begins by acknowledging that his task is too difficult for him, and then goes on to prove this statement most thoroughly, his contribution is liable to do much more harm than good.”

We are pleased to give below the very sensible and kind remarks—kind, that is, to America and Professor Mayr—of the editor of our English contemporary. Before doing so, however, we would take this opportunity of disclaiming any leaning toward Professor Mayr's theories. We desire, however, that he should have fair play, and especially that he, as a representative of the United States, should be treated with due respect by our English cousins.

The following is the editorial referred to from the *British Journal of Dental Science*:

“In the last number of this journal we republished, from an American source, an article on ‘The Chemical and Physical Effects of Fillings upon Teeth,’ which we fully expected would elicit some replies. And in this we have not been disappointed, for it has called forth an answer from one who is, in this country at least, the best qualified to undertake the task. Mr. Mayr is a chemist and physi-

cist of some reputation in his own land, but he is careful to tell us that his practical experience of dentistry is very limited. Mr. Fletcher, on the other hand, besides being an accomplished chemist, has the further advantage of being a practical dentist of no mean skill. It is not to be wondered at, then, that he has little difficulty in disposing of some of Mr. Mayr's rather surprising statements.

"But it is not with these that we wish to concern ourselves just now; we wish rather to consider in what spirit suggestions from an outsider should be received. It seems to us that this should depend entirely on the spirit in which they are made. When a man puts himself forward and dogmatizes blindly on a subject about which he knows little or nothing, he deserves to be put down, or, as it is generally termed, snubbed. But if, as in this case, the speaker states honestly, I don't know anything about dentistry, but I do know something of chemistry, and I will tell you how my knowledge leads me to view some of your processes which are governed by the laws of chemistry, we think that that man deserves different treatment, and from this point of view we think Mr. Fletcher is rather too severe on his opponent.

"We would especially dissent from Mr. Fletcher's opinion that such a paper as this is likely to do more harm than good. In our opinion nothing is more improving than the criticisms of an educated layman. We are all far too prone to adopt practices empirically and without properly thinking out and weighing the steps by which we have arrived at a given conclusion. Few can boast of the combination of theoretical with practical knowledge which Mr. Fletcher himself possesses, and it needs some such stimulus as our chemical friend supplies to rouse us to give an account of the faith that is in us."

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#### AMERICAN DENTAL CONVENTION.

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OWING to the fact of a large number of dentists intending to visit Europe during the session of the Medical and Dental Convention there, it has been thought advisable to defer the meeting until later. Due notice of time and place will be given.

By order of the President.

JOHN ALLEN, *President.*

J. G. AMBLER, *Chairman of Committee of Arrangements.*

## DENTAL LAW IN NEW YORK STATE.

THE following circular has been issued and handed us for publication :

By an Act passed at the present session of the Legislature, which is hereunto annexed, such persons as can take and subscribe an oath that they were in the regular practice of dentistry in this State on the 20th day of June, 1879, are entitled to avail themselves of the provisions of this law, which was signed by the Governor on the 26th day of May last. But they must have been a dentist in regular practice in this State at that time—not a student or an assistant in some dentist's office, nor a person out of practice: and must swear to it, and file their oath with the County Clerk, before he can allow them to register.

A. M. HOLMES,	} <i>Committee on</i>
A. P. SOUTHWICK,	
L. S. STRAW.	
	<i>Dental</i>
	<i>Legislation.</i>

JUNE 10th, 1881.

An Act for the relief of certain persons engaged in the regular practice of Dentistry in this State.

The people of the State of New York, represented in Senate and Assembly, do enact as follows :

SECTION 1.—Any person who was engaged in the regular practice of Dentistry within this State on the twentieth day of June, eighteen hundred and seventy-nine, and who was entitled to registration as a dentist as provided by the third section of chapter five hundred and forty of the laws of eighteen hundred and seventy-nine, entitled "An Act to regulate the practice of Dentistry in the State of New York," but who failed to cause his name to be registered as therein provided, and who shall make and file with the clerk of the county in which he registers, his affidavit to the effect that he was so engaged in such practice of dentistry and so entitled to registration, may, within sixty days after the passage of this act, cause his name, office and post-office address to be registered in the County Clerk's office in the manner provided in said third section of said act, and such registration shall have like force and effect as if made within the time prescribed by said section of said act. Any person who shall willfully make and file a false affidavit for the purpose of procuring such registration shall be subject to conviction and punishment for perjury.

SECTION 2.—Every person hereafter authorized to practice dentistry within this State shall, before commencing to practice, register in the clerk's office of the county where he intends to commence the practice of dentistry in a book to be kept for that purpose, his name, office and post-office address, together with the name of the society, college or other authority from which he has received his diploma or certificate of qualification to practice dentistry.

SECTION 3.—The clerk of any county shall be obliged, upon the payment to him of the sum of twenty-five cents, to make the registry of any person provided for in the second section of this act, which sum the clerk is entitled to collect and receive from the person registering.

SECTION 4.—This act shall take effect immediately.

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## PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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THE first two articles in the *Ohio State Journal of Dental Science* have not much to do with dentistry, but at the same time they are valuable and interesting. "Cholera Infantum" is dealt with by "Galen," while Professor J. S. Cassidy writes on "Matter—Spirit," and shows by his remarks that he has studied the latest and best thought and investigation made on the subject by such men as Crookes. Dr. J. A. Robinson gives a few hints on Richmond Crown, after which the editor discourses on "Anæsthesia—Nitrous Oxide." He values nitrous oxide as an aid to the dentist, but tells an anecdote or two illustrating the way in which this anæsthetic is abused by some. The Doctor turns aside a little to have a side hit at the "unmannerly comrade" of the dentist, who sometimes causes his friend to "inhale his filthied smoke," and then "listlessly expresses hope that his cigar is not offensive." Dr. J. A. Robinson gives a charming little poem on May. Correspondence from various parts of the country follows. The editor in his "Specials" deals with the question, "Shall Dental Surgery be Subdivided?" He refers to the tendency abroad in the land for men of the highest ability in the profession to drift out of the performance of mechanical work, allowing the operative part of dentistry to monopolize their time. He deprecates this tendency in forcible language. The remaining part of the *Journal* is full of very interesting matter. The veteran editor, and the publishers, too, are to be congratulated



on the high standard at which they are able to maintain their newly-born but vigorous magazine.

The action of rapid breathing in obtunding pain is dealt with in a long article by Dr. Bonwill in the *Dental Register*. The essay was originally read before the Philadelphia County Medical Society. This subject is a hobby of the Doctor's, and the various processes of his mind before he arrived at his present conclusions are elaborately given. Under the head of "Correspondence," Dr. George Watt exults over the fact that the late meeting of the American Medical Association made provision for a section on dentistry.

In the *Independent Practitioner*, Dr. Lawrence Turnbull, in the continuation of his consideration of the subject of "Anæsthetics," deals with ether. He quotes from various journals cases of deaths that have occurred from patients inhaling ether, and states that when ether mixed with chloroform is given, the chances of danger to the patient is reduced; but "if these are given by a careless person, and on a towel, no matter how much starched, toward the end of the operation the patient will inhale nothing but pure chloroform." Dr. I. N. Carr has an article on "Gold *versus* Rubber for Artificial Dentures." The Doctor infuses a considerable amount of interest into it by means of his intense earnestness. One is inclined to imagine that, just prior to penning this article, he had a somewhat heated controversy with a professional brother on the subject, in which he (Dr. Carr) got a little the worst of the argument. Doffing his coat and stretching out his arms, he would then sit himself down and allow his feelings to boil over through the medium of his pen. But, after all, some of the Doctor's arguments are very queer. For example, he asks: "How is it possible for the dental profession to elevate itself as a whole when some dentists advise and use themselves a material that is not only unfit, but is so simple of manipulation that apt boys being around dental offices a few months can mount sets of teeth upon it, and, as soon as they can do this, off they go and swing their sign, 'Dr. John Smith, Surgeon Dentist?'" It is a little too far-fetched to condemn rubber because it is easy of manipulation. That is nothing whatever against it. Rather is it something in its favor. The Doctor waxes warm, and the climax is reached, when, speaking of dentists who advertise "rubber sets" for \$5, he says: "Can you, my brother practitioners, conceive of anything more calculated to lower our standard than this? Why, it is reducing our profession to a mere trade." But, after all, friend Carr

is a good fellow. He asks at the close of his article that if he has said anything to offend the dignity of any member of the profession that a "mantle of charity will be thrown over it." We forgive you, Doctor. A little tempest is good for us sometimes.

The place of honor in the *Cosmos* is given to an article on "Bleaching Teeth," by Dr. J. Truman. It is a very useful paper, and contains many valuable hints. Among the selections is an extract from a medical journal under the head of "Amenities of Journalism." Some of the troubles which meet the editor are dealt with by one who evidently knows from experience what he is talking about.

Is there to be a new era in dentistry? Are the words of "Student" in the *Dental News* under the head of "Psychological" to set in motion a ball which shall only end when every operator is able to bring mesmerism to his aid in his work? Nervous patients are very troublesome at times. If a simple touch or a glance would quiet their nerves and allay their excitement a great end would be accomplished. One thought which instinctively rises to one's mind on considering this subject is, that the mesmeric power would be liable to abuse. Some unprincipled men would use it in connection with their practice for other ends. This is probably true, but it is no argument whatever against it. Because some men put razors and guns to uses for which they were never intended, that is no reason why an embargo should be laid on them. Just so because mesmerism, or a form of subduing one's will by a stronger, is liable to abuse, that is no reason why its advantages should not be secured. I should very much like to hear some opinions on this subject.

**DENTISTRY IN POLYNESIA.**—The dentists of the Solomon Islands, though somewhat heroic in their treatment, are said to be but little inferior to their European brethren. When a man wishes to have a tooth or two replaced, a couple of assistants hold him firmly, while the operator, propping the patient's mouth open with pieces of bamboo, proceeds down along the gum until he has cleared the surface of the jaw-bone. Into the cavity thus made along the gum he inserts a piece of tortoise-shell or mother-of-pearl of the requisite length, and then binds the gum up on each side of the new tooth with a kind of vegetable glue. After a few days' feeding on liquid diet, the wound generally heals; and it is a common sight to see old men with almost all their teeth replaced in this fashion.—*London Family Herald*.

## A PAMPHLET.

WE have received a copy of a pamphlet extolling the virtues of the Healing Springs in Bath county, Va. The glories of the place are apparently very great, and one is almost led to believe that he may make himself ill with impunity by all sorts of excesses and go and get cured at Healing Springs.

THE ERUPTION OF A TOOTH.—When a tooth is about to be cut very active absorption of its bony surrounding goes on, particularly on the anterior surface, the bone behind it being still required as forming part of the crypt of the developing successional tooth. But no sooner has the crown passed up through the very wide and free orifice so formed than absorption gives place to deposition, and the bone rapidly develops so as to loosely embrace the neck of the tooth.—*Tomes.*

## NOTES.

## TAR-WATER.

FROM the proceedings of the California State Dental Association we clip the following remarks by Dr. Robinson: "When I was a boy I remember coming into possession of an almanac that was published in Ireland, and it was quite a curiosity to me; and it gave tar-water there as the universal antidote for ills that afflicted humanity. It cured everything—the whole range of ills. The thought occurred to me, whether if we make a weak solution of creosote or carbolic acid, and the compounds are very closely allied, would it not have the same effect? Now, what does water dissolve from the tar? There are certain soluble elements that the water dissolves; the great mass it does not. I think the active principle in tar-water, carbolic acid and salicylic acid are very near alike, and I have been using a very weak solution of carbolic acid. Sometimes I have tried salicylic acid and sometimes, like all the rest, I have

thought that it was splendid, and at other times it did not do any good."

## TRAVELING IN RUSSIA.

DR. THOMAS, a dentist of Vienna, was summoned recently to Kirwin, in Russian Poland, to perform a dental operation upon the Countess Waleska. At the border station of Radjwilow he was stopped, required to show his passport and have his baggage searched. His name at once awakened suspicion, from its resemblance to that of Thomassen, the infernal machine man of Bremerhaven; and when the officials found a mysterious apparatus in his baggage this suspicion became fixed and positive, and he narrowly escaped faring roughly. He tried to explain its working, but without much avail; and, when he was finally allowed to go on his way, a detective accompanied him until he met the servants and carriage of the Countess. The machine, however, had been previously confiscated. Such is traveling in Russia.

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*August*, 1881.—No. 92.

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## COMMENTS ON MODERN DENTISTRY.

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BY DR. G. W. WELD, NEW YORK CITY.\*

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To comment on the present state of dental science and the improvements which have taken place during the past few years necessarily presupposes an accurate knowledge of dental literature and a practical knowledge of operative and mechanical dentistry. As we judge merit by contrast, so we must judge the improvements in the dental profession by comparing the more modern with the older methods; and, as the subject refers to the past as well as the present, a retrospect is essential to determine the present status of dental science.

That the art of dentistry has been enhanced by certain conditions is clearly visible to every mind, but a right decision between the true and the false in the so-called improvements can only be obtained by close observation. Lord Chesterfield helped to improve dentistry when he said that fine and clean teeth are among the first recommendations to be met with in common intercourse with society. Another eminent writer improved the professional status of dentistry by saying, "Let a woman have fine eyes, a pretty mouth, a handsome nose, a well-turned forehead and elegant hair: but only let her

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\* Read before the Dental Society of the State of New York, May 11th.



teeth be bad, blackened by caries or covered with thick tartar or viscid accretion—let her, in a word, exhale a contaminated breath, and the moment she opens her mouth she will cease to be thought beautiful.”

It seems hardly necessary to go back to the early times when dentistry was in its infancy and before it occupied anything like a properly recognized position among the different departments of minor surgery, when the barber was physician and dentist, when the blacksmith, with a knack of tooth-drawing, represented surgical dentistry. Suffice it to say that the days of charlatanism, in this country at least, are passing from view, and the modern requirements demand that the dentist of to-day shall be a man of education and culture—that he shall possess a professional certificate and have conferred on him a surgical status that will entitle him to the designation, Doctor of Dental Surgery.

One of the first attempts to improve the status of dentistry originated in England in 1840 and 1841. At that time considerable desire was manifested by the more respectable members of the profession to be recognized in the new Medical Act of 1843. The attempt, however, to place fully-qualified medical men on an equal footing with those only partially qualified, after considerable discussion and more opposition, proved a failure, and it was not till 1858 that dental certificates from the Royal College of Surgeons were issued. It may be said, therefore, that progressive dentistry in England dates from the time special examinations commenced in the institution just mentioned. Prior to all this, however, the Baltimore College of Dental Surgery in the United States—the oldest dental college in the world—materially aided in advancing the art of dentistry by preparing a carefully-arranged curriculum of study and awarding diplomas of Doctor of Dental Surgery on the candidates having passed the satisfactory examination. Since the organization of this college, some twelve or fourteen others have been established in the United States, each one having the right to make special examinations and granting diplomas.

Numerous dental societies have been formed, and legislative Acts have been passed to regulate and improve the practice of dentistry. It would seem that the present status in dentistry over the whole civilized world is indebted, either directly or indirectly, to the colleges and societies which have been established in the leading cities of the United States, but especially to those dentists of our Union

who, by long years of devotion to the cause, have rescued it from the depths to which certain men—half doctor, half dentist, or all dentist of no calibre—had so long held it. Thus, while it is obvious that the status of dentistry began to improve some time in the fourth decade of the present century, it is still more obvious that the great boom in dentistry occurred when cohesive gold and contour filling with the aid of the mallet first sprung into existence. The introduction of cohesive gold and the mallet system for the filling of the natural teeth created a commotion in the dental profession as an alarm-gun booming through the night air will create a sensation in a quiet community.

The restoration of contour, the size of the plugs and their brilliancy seemed to be the general cry in 1864-5. As a ship under a heavy press of sail will rush on before the wind, so dentistry rushed on before the almost universal opinion that cohesive gold, *per se*, was the proper material for filling natural teeth. The rushing after beautiful results, the force necessary to the exact and accurate impact, the packing of the greatest amount of gold into a given space, were all problems which the mallet alone could solve. A long interval of time has elapsed since the boom alluded to commenced. Let us consider for a few minutes what results have been attained, and whether modern dentistry deserves the reputation it has acquired.

Among the additions to dentistry generally called improvements may be mentioned cohesive gold and serrated points, rubber dam, the burring engine, improved methods of adjusting pivot teeth, molded artificial teeth, hard rubber, celluloid, metalloid castings, and, last of all, nitrous oxide. We are told that dentistry owes its present status to these additions. These, at least, constitute the motive power which has made prominent the science of dentistry. But has the great principles which underlie the profession—namely, the saving the most teeth for the greatest number of people—been subserved?

Before proceeding to discuss the status of conservative dentistry, permit me to direct your thoughts to a department which occupies a prominent place in the province of dentistry, and which is, perhaps, first entitled to brief mention—mechanical dentistry. First, mechanical dentistry in its relation to a true professional status; second, mechanical dentistry viewed in the light of modern improvements. The supply of artificial substitutes in the place of the natural teeth when lost, and the mechanical requirements necessary to a proper

degree of proficiency in the art, have always been the greatest obstacles to a desired professional status, irrespective of any improvements which may or may not have taken place.

It has often been observed that neither the manufacture of artificial dentures nor their insertion in the mouth can be properly called a profession. Mechanical dentistry, in fact, seems to appear in the nature of a trade or mechanical employment rather than that of a profession, and the time required to prepare oneself and the nature of the work raise the query whether, after all, mechanical dentistry deserves a classification with the profession of dentistry proper. We say that a profession demands a knowledge of the liberal arts—a trade or occupation a knowledge of a mechanical art. A man may be eminently able to extract a tooth, make a set of artificial teeth, and even build up a golden crown on a human tooth, and still be as much of a mechanic as if he were engaged in an occupation not considered a profession. Physical and mental labor cannot go hand in hand beyond a certain point. As a rule, the one incapacitates a man for the other in proportion to the amount of nervous force exhausted in each case. He who sits at a work-bench during the day, or stands up at a dental chair for half a day malleting gold, cannot, from the very nature of things, rightly call himself a member, at least of a liberal profession.

It is for this reason that we have been taught that the professional status of dentistry depends upon the proposition whether the decay of the teeth is due to a mere local or constitutional cause. In a word—the term profession, in the sense here intended, requires a knowledge of the morbid conditions of the human system, leading in some way to the disorder of the dental tissues. An eminent modern writer recently said, in referring to the educational phase of dentistry and the desire manifested on the part of dentists for recognition as a branch of medicine, that the profession had divided itself into three sections—First, those who desire to see all dentists fully qualified as surgeons; second, those who desire them to have only a certain amount of surgical knowledge; and third, those who advocated dentists being altogether disassociated from surgeons, and having a college and diploma of their own. This last section—*i. e.*, those who desire separate institutions for both medical and dental students—represents the present educational system. What changes may take place to meet future professional requirements it is difficult now to predict. It is apparent, however, that, in order to

attain certain desired ends, dentists must embrace the medical profession. The dentistry of the future will require something more than the title of D.D.S. to ratify its ambitions. The gynæcologist becomes proficient in practice by a special course of instruction. The aurist and oculist the same. Why should dentistry, of so much importance to the public, have institutions of learning separate and distinct from medical institutions? When all the dentists in the land are titled M.D.'s and their diplomas mean something more than a mere roll of parchment, when they understand pathology and are able to differentiate the various kinds of retrograde metamorphoses in the human system, then, and only then, will dentistry be recognized as a part of medicine.

What are the improvements supposed to have been introduced into the department of mechanical dentistry? If we turn over the pages of dental literature to the period prior to the invention of hard rubber, celluloid and mineral matter for base plates, we find that gold was considered the best material, and the one generally used for this purpose. The best artificial teeth used at that time were carved teeth, the merits and advantages of which are as follows: First—as carved teeth were made especially for each case, they were better adapted to the various formations of different mouths, and insured a fit in every case. Second—they were much stronger, and the natural expression of the face was better retained, especially in irregular cases. Third—the artificial pattern which common molded teeth present was entirely obviated. Has any improvement taken place in the mechanical department of dentistry? Go into any first-class dental office to-day in New York City and inquire for the best and most durable base for mounting teeth, and the dentist, unless he is interested in some patent of his own, will almost invariably answer, gold. It was gold for base plates yesterday—it is the same to-day. But the porcelain blocks formerly used, and which were constructed with special reference to the condition of the parts to be supplied, restoring in all cases the harmony and beauty of facial expression, have almost entirely disappeared, and in their stead molded teeth constitute the so-called modern improvements. It is true that there is a variety of forms and colors and different sizes and shapes of molded teeth adapted to particular cases; but I venture the assertion that there is not a set of molded teeth in a dental depot at the present time that can compare in strength and life-like appearance with the teeth worn by Parkman



when he was struck down by Webster more than thirty years ago, and which were recognized by Dr. Keep, after they had been through the fire and raked from the ashes, as having been made by him.

The manufacturers of dental ceramics are undoubtedly entitled to great credit for what they have accomplished. If considered from an economical standpoint, molded teeth are to be preferred. If from a standpoint of true merit, the balance weighs very much in favor of carved blocks. Economical teeth, however, mounted on a cheap base have retarded the professional growth of dentistry more than any one thing except nitrous oxide gas. The invention of hard rubber and celluloid, as applied to dentistry, has done more to injure the professional status of dentistry than all the colleges have done to improve it. Hard rubber plates and nitrous oxide gas combined constitute the iniquity of modern dentistry. Just in proportion as you offer cheap artificial substitutes for the natural teeth, or provide economical methods for painless extraction, just in proportion does the profession retrograde. On the other hand, in proportion as one makes conservative dentistry expensive, advising and recommending only the use of cohesive gold for crowns, so in proportion will the impression be conveyed which is so frequently set before the patient by gas associations, that artificial substitutes are cheaper and to be preferred to the natural teeth.

We come now to consider that branch of dentistry the practice of which comprises, primarily and principally, the preservation of natural teeth—operative dentistry. The rules for practice which pertain to this branch of the profession have materially changed during the past few years. Let us see how the present modes compare with those of former years. Gold foil was considered to be the best filling material by our professional ancestors. Gold foil is the material in general use to-day. The name of the material in both instances is identical, but, when manipulated, very different indeed. In former days it was soft gold, lateral and hand pressure, supplemented by crystal gold, amalgam, tin and gutta-percha. To-day it is cohesive gold, longitudinal and mallet pressure, supplemented in a few instances by soft gold, amalgam, gutta-percha, tin and the oxy-phosphates and chlorides. Some of our most brilliant operators practice and advise only cohesive gold for filling teeth. A majority of the best and most skillful operators have discarded the old-fashioned method, or, never having learned

it, are satisfied with the modern ones. The mind of one of the best gold operators in the country has become so imbued with the importance of using nothing but cohesive gold that he recently stated before one of the district societies, when speaking of the merits of the various kinds of filling materials, that he had not used any of the amalgams since 1876. Another eminent and representative man advocated nothing but cohesive gold, and said that there were three essential requisites to be considered in filling teeth—First, cohesive gold, nothing but gold: second, restoration of contour, which, in his opinion, seemed almost an improvement on Nature; and third, the means to apply, or the use of the different kinds of mallets best calculated to thoroughly consolidate the gold and harmonize with time and expense, and the health of both patient and operator.

In the month of February, 1881, under the auspices of the Clinic Committee of the First District Dental Society, a public test took place to test the relative merits of the various kinds of methods for packing gold. The means of applying were mallet pressure, including the electric, automatic, steel and lead mallets. And, in opposition, the old-fashioned method of hand pressure was called into requisition. The result of this contest is instructive in many ways. It illustrates the conditions most favorable to the different methods of inserting gold, and the solidity obtained by the different kinds of impact. We may learn from the result of this contest what merit is due to the modern method of packing gold, and how far the harmony is in accord with the time, expense and health of both patient and operator. In order to make this contest perfectly fair and afford a true estimate of the amount of gold that could be put into a given space by the various kinds of pressure, and also the time occupied in performing each operation, a number of wooden blocks of the same size were prepared expressly for the occasion. In each block a small glass tube partially enveloped with cement was inserted, each tube being of the same dimensions. In front of each tube there was arranged a small brass button, which was placed a quarter of an inch from the surface of each tube, and designed to render the cavity somewhat inaccessible and the operation of filling more difficult to perform. The advocates of the mallet system, who had volunteered to enter into the arena of this contest, seriously objected to the brass buttons placed in front of the orifice of each tube, and demanded that they be removed. In vain the Committee stated that

a quarter of an inch was more than an average separation or space usually found between teeth; in vain they offered to remove the buttons half an inch from the tubes. Nothing would answer but complete removal of the buttons. An accessible cavity in good light and under the most favorable circumstances suited the cohesive foil workers, but to fill a cavity slightly inaccessible was too much of a risk when it was known that the walls of each cavity would be subjected to the closest scrutiny. So the cavities were made perfectly accessible, and filled after the method of each individual operator, with the following results :

Operator.		Weight of filling.	Time occupied.
Dr. Webb,	Electric mallet,	$9\frac{65}{100}$ grains,	67 minutes.
Dr. Ottolengui,	Automatic "	$9\frac{41}{100}$ grains,	105 minutes.
Dr. Brown,	Steel "	$9\frac{25}{100}$ grains,	50 minutes.
Dr. Rynear,	Lead "	$9\frac{20}{100}$ grains,	37 minutes.
Dr. Weld,	Hand pressure,	$7\frac{80}{100}$ grains,	30 minutes.
Dr. Dodge,	Hand pressure,	$6\frac{95}{100}$ grains,	27 minutes.

The average time taken in filling each cavity with the cohesive gold and mallet pressure was  $64\frac{3}{4}$  minutes, while that of the soft gold was  $28\frac{1}{2}$  minutes. Let us suppose a dentist to be called on in his daily practice to fill two such cavities in the mouth similar to those just described and we can then quickly perceive the great saving of time in filling teeth by the old-fashioned method. With the use of cohesive gold and the mallet two such cavities could be filled in 2 hours and  $9\frac{1}{2}$  minutes; with soft gold and hand pressure, 57 minutes. Difference in favor of hand pressure, 1 hour and  $12\frac{1}{2}$  minutes. Allowing 300 working days to the year of 6 hours per day, the time saved annually to each dentist would be 60 days, 2 hours and 30 minutes. Estimating the length of life of a practicing dentist to be 30 years, the time saved to himself and patients for that period of time would be 6 years and  $12\frac{1}{2}$  days. Estimating the number of dentists in the United States to be 12,000, the aggregate of time saved each year would be 2,416 years and 200 days. The aggregate time saved in the course of 30 years of 12,000 dental practitioners would be 72,500 years. The results of these calculations are startling, but they are not to be ignored.

There are other objections of equal importance. First—cohesive gold does not possess the power of adaptability for certain cavities, which, I contend, is inherent in soft gold. Second—cohesive gold

cannot be manipulated with the same degree of certainty in obscure cavities, hence decay from defective manipulation. Here we have the origin of electro-mechanical action, the truth of which theory I do not now propose to discuss. Cohesive gold and the mallet are important factors in operative dentistry, only in so far as they accomplish results which cannot be secured by the old method. As a supplement they are undoubtedly of value, but, when used exclusively, how plainly do facts put down the attempt to keep up the ridiculous contention that they are superior to old-fashioned methods.

But there is an affirmative side to the subject. It is gratifying to know that great improvements have taken place in other phases of the dental art, in the enumeration of which may be mentioned as most prominent the greater perfection of plastic materials, the better and more permanent adjustment of pivot teeth, the convenient adaptability and increased variety of dental furniture, and last, but not least, the true professional spirit which, whether allied to dentistry or medicine, is the same—the spirit that cherishes true investigation and seeks after the truth. Let us all endeavor to promote and be guided by a feeling of true professional courtesy in our mutual researches after knowledge, proving all things and holding fast that which is good.

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## THE ULTIMATE ELEMENTS OF THE TEETH AND BONES.

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BY S. B. PALMER, M.D.S., SYRACUSE, N. Y.

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As we consult works on anatomy and physiology for the analysis of the teeth, we find what are termed proximal elements, thus :

Phosphate of lime,  
Fluoride of calcium,  
Carbonate of lime,  
Phosphate of magnesia, and  
Soda with chloride of sodium.

This statement is familiar to the reader. With slight changes, not necessary to mention at present, the same is true of the analysis of the cementum and bones. This information fails to meet the requirements of the subject assigned us, as each of the



proximate elements are compounds representing two or more ultimate constituents. In order to condense the subject, we will analyze these compounds together, when they are found in both teeth and bones. The object in writing this paper is to ascertain the elements called for by the title, viz., the ultimate constituents of tooth-bone, the manner in which they combine to form the structure, and, not least, to account for the diversity in the density of the structure.

Of the sixty-four chemical elements, about sixteen are found in the human body. Water is universally present in all the tissues and fluids in large proportions. In the blood its proportion is 795 in 1,000, in bones 130, and in teeth 100. Its presence is necessary to give fluidity. Water constitutes between two-thirds and three-fourths of the entire weight of the body. Water is composed of hydrogen and oxygen, and is expressed by the symbol  $H_2O$ . Thus we have two of the elements, hydrogen and oxygen.

Chloride of sodium is found in bones, and is given as 2.5 in 1,000. It is also found in dentine, but not in the enamel of teeth. It is composed of one equivalent of chlorine, 35.5, and one of sodium, 23.3=58.8. The symbol is  $NaCl$ , which gives two more elements—chlorine and sodium.

Phosphate of lime is found in the enamel, and put down as 88.5 in 100, in dentine 28.0, and in bone 55.0. Its office in the teeth and bones is to give them the resistance and solidity necessary for their functions. This substance is not deposited in the cartilage mechanically, as corundum is in the manufacture of wheels and disks, but is chemically united with the animal matter of the tissues so as to present a compound unlike either phosphate of lime or cartilage. By the aid of acid it can be dissolved out of the cartilage, leaving the latter the form of the tooth or bone. When by disease or other pathological disturbances the phosphate of lime is deficient, there appear upon the crowns of the teeth, which at the time were receiving the deposits, pits and furrows often destructive to the teeth in after years. Phosphate of lime is composed of phosphoric acid and lime.

Phosphoric acid consists of one equivalent of phosphorus and five equivalents of oxygen,  $PO_5$ . This acid has recently claimed the attention of dentists, being the liquid portion of oxy-phosphate filling material. In this compound we find another element—phosphorus.

Carbonate of lime is found in bone and the teeth. The propor-

tion in bone is 11.3 in 100, and 5.3 100ths in dentine, and 8. in one hundred parts in enamel. This salt is found in nature in various forms, as spar, marble, chalk, limestone, etc. It is an essential constituent of the bony tissues and the principal ingredient in the shells of mollusks. It is readily acted upon by acids. With hydrochloric acid, chloride of calcium is formed; with sulphuric acid, sulphate of lime, and so on with all the acids capable of acting upon the teeth. Carbonate of lime is composed of carbonic acid gas, which is one atom of carbon combined with two atoms of oxygen, represented by  $\text{CO}_2$ . Thus we have carbon to add to the list.

Fluoride of calcium is a binary compound, found in the enamel. Fluorine is an element; the symbol is F, which makes the seventh in the list. Calcium is the peculiar metal of lime existing in the mineral kingdom chiefly as a carbonate, and phosphate in bones and shells. The symbol of calcium is Ca. This makes the eighth simple element.

Alumina is found in enamel. It is composed of two parts of the metal aluminium and three of oxygen. It is quite abundant in nature, and known as clay. Thus aluminium makes the ninth ultimate element.

And last we have phosphate of magnesia. Magnesia is composed of the metal magnesium (Mg), sixty per cent. of magnesium and forty of oxygen. This metal completes the list of elements found in the bones and teeth, according to the analysis given by standard authors, taken from the proximate elements.

Never having seen this analysis given in any work, it has been both interesting and instructive to ascertain the ultimate constituents of the bones and teeth. Having taken down the structure of teeth, and, to some extent, noted the characteristic of each element, it may not be unprofitable to systematically consider Nature's provision for building up tooth-structure.

We may presume that the teeth selected for analysis have been those of average density. As all know, teeth are composed of animal matter and lime in various forms—about twenty-eight parts of the former and seventy-two of the latter in one hundred. We also know that teeth of these proportions, or even those containing less of the animal matter, may be safely filled with gold; but when the percentage of animal matter predominates, as it does in teeth which are attacked with caries upon the approximate surfaces at an early age, it is useless to contend that such tooth-bone is not a conductor.

Thermal changes, the presence of acids, saccharine matter, or contact of an opposite metal with a filling, all plainly testify to this truth. The perfectly-developed tooth is almost free from any of these influences.

As we have all intermediate grades of texture, so we have corresponding degrees of durability of gold fillings. Compatibility or incompatibility is governed by natural laws, according to circumstances. It is for us to diagnose for conditions, and work under laws favorable to ends desired. The laws we cannot change.

If the question in regard to circulation in tooth-bone is settled, it will be by science and facts. We have the result of numerous experiments by scientific gentlemen given, to prove that there is no conductivity to bone, and consequently no electrical action caused by metal fillings, and no secondary decay induced by gold. This is truth so far as experiments are concerned, but not the whole truth. These experiments are all made in support of one side of a question. The teeth selected are such as we all fill, and with which there is no trouble afterward. It is an effort to prove points upon which there is no disagreement, namely, that gold is the best filling material with which to fill teeth, whenever it can be used with as much success as any other. The point we claim seems to be entirely overlooked, and to which the above-mentioned facts do not apply, because the conditions and circumstances are so changed that the results are determined by another law.

It is a law that gold will arrest decay in ordinary teeth, and, if the operation has been properly performed, there will be no secondary decay from the causes mentioned. It is also a law that gold will not arrest decay in cartilage protected by fifty per cent. of mineral matter. Empirically we come to know this fact, and the wise are filling such low grades of teeth with plastic fillings, to wait further calcification. Can it be possible that facts regarding the operation for filling teeth can injure dentistry?

We do not wish to limit or curtail the use of gold as a filling material, but desire more knowledge respecting its relations with tooth-bone so as to use it with greater success. Chemistry is to furnish this information. The lesson we may learn from studying the elements of tooth-structure is this: Any metal used as a filling in contact with living tissue irritates, inflames and devitalizes the surface of the tissue so exposed. If the vascular portion is sufficiently protected by animal matter, the mere surface becomes devi-

talized, and no harm is done. If not sufficiently guarded, decomposition of the vascular portion ensues, the dark shade back of the filling, as often seen through the enamel, tells of the condition, and it is only a question of time, according to the density of the tooth, when the filling will prove a failure.

Thus what has been said in favor of gold is true, according to the circumstances favoring success. What is said against it is equally true under other circumstances. We need greater precision, more definite understanding, before we declare this or that mode of practice the best and the only true method.

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## WRITING FOR DENTAL JOURNALS.

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MARSEILLES, *June 5th*, 1881.

SOME sage, and some less sage, reflections upon writing for the press, from the pen of a MISCELLANY correspondent, have recently fallen beneath my eye, and have served to remind me of my own dereliction in this respect, for I believe it to be the duty of every dentist who has the welfare of his profession at heart, and who can write a passably-good letter, to pen an occasional article for a dental journal.

I certainly do not agree with Dr. Robinson with regard to the right of editors to exercise their prerogative in the acceptance or rejection of communications. To deny the right of publishers to exercise their own discretion in this matter is to make their relation to correspondents but that of menials, whose sole duty it is to serve out such viands as their worthy lords see fit to put at their disposal, and, were such an order of things to exist, the unfortunate public would likely be served to many a literary dish of indigestible platitudes.

The more discriminating the editor, the better served the reader: and, should my own modest article be rejected, I shall infer that it has been crowded out by what the editorial Cerberus decided to be more meritorious matter, and that in his eyes the tone of the magazine would have been lowered by its publication.

Writing is like filling teeth—some very poor productions must be turned out before the achievement of a finished article.

With regard to remuneration, that is a more difficult question. If men in full practice were paid for their writings in proportion to the value of the time expended in their preparation, the tax upon the



publishers of ordinary technical periodicals would be insupportable ; while, on the contrary, if no compensation is received, the profession frequently loses the benefit of the counsels of its most enlightened members, and the columns of the professional publications are too likely to degenerate into mere receptacles of amateur essays and literary plagiarisms. Occasionally a complimentary subscription is given in partial recompense for irregular correspondence, and were such a delicate appreciation of services rendered more frequently shown to contributors, many whose pens are now rusting from disuse would doubtless feel greater interest in devoting their leisure hours to literary labors and the advancement of their profession.

Personally, I have to acknowledge one such complimentary subscription to a local publication in America.

Leaving these bones to be picked between publishers and contributors, I will continue with a word upon *retrogressive* dentistry. While so many of our fraternity are abandoning old systems and going off upon a tangent in pursuit of some new departure, the duty of taking a position at the tail-end of the cart and pulling back a little devolves upon some one. This is a bold position for a young man to assume ; but the distance that separates me from the majority of my readers will cause the shafts of malice that are certain to be launched at me to fall impotent upon my shoulders.

No system of practice has been more generally abandoned in America than that of employing spiral springs for the retention of artificial dentures. So completely, indeed, have they passed into oblivion that it is doubtful whether one in ten of the readers of the MISCELLANY ever saw a pair in use : yet I am convinced, by personal observation, that in certain cases they give a solidity of attachment to a piece that cannot be attained by atmospheric pressure. Here, in Europe, they are still in common use, and although my prejudice against them has long been wearing away, it was not till quite recently that the peculiar difficulties presented by a case in hand induced me to resort to their employment. The patient was a man with small mouth and much muscular adhesion. There being no remaining teeth in the upper jaw, I first made him an atmospheric pressure plate ; but, although the adaptation appeared perfect, it rendered him no service in mastication.

A second equally unsuccessful attempt decided me to resort to the use of spiral springs. The difficulty of attaching them was augmented by the condition of the lower jaw, in which only the

posterior molars were wanting. In lieu of a lower plate, platinum caps were swaged to fit the second bicuspid and first molars. To these were soldered pins for the attachment of the springs. The plate was constructed with a vacuum, the springs adjusted, and, when inserted, the gentleman complained of no annoyance, and ate a crust of bread without difficulty. The patient has since called and assured me that, after a fair trial, he finds the teeth satisfactory in every particular.

In reflecting over failures during past years, I can recall several cases where, I am now convinced, the use of spiral springs would have removed every difficulty. The reader may pooh! pooh! all he will, but personally I believe that no mechanical dentist should be ignorant of their application, and do not hesitate to assert that, in future, I expect frequently to resort to their use in extreme cases.

The extraction of all roots, offending or unoffending, in preparing the mouth for the insertion of artificial teeth is a hobby that is saddled and ridden by the majority of American practitioners. In Europe the roots are left undisturbed more frequently than they are removed. This is partially owing to the greater nervous susceptibility of the people with whom dentists here have to deal, but is also in great measure due to the advantages derived therefrom. Do not be shocked, worthy reader: roots of teeth are not chassepots or torpedoes, and can frequently be allowed to remain without prejudice to the health of the patient or detriment to the artificial denture, while, on the contrary, they may play a very important *rôle* in the preservation of the natural expression of the patient's physiognomy. Four years' observation of European prosthesis has never betrayed any of those ghastly, snow-white, tombstone dentures that yawn as from a churchyard in hundreds—nay, one might say thousands—of American mouths.

This is not complimentary to the much-vaunted American dental art. But wherein lies the secret of this remarkable distinction? Is it that the French are our superiors as mechanical dentists? Or is it owing to the comparatively small number of artificial dentures worn upon this side of the ocean? I think it is owing to neither of these causes: but is, on the contrary, due to the less frequent extraction of roots of teeth, and the consequent smaller number of gum teeth employed. This peculiarity in the system of practice is apparently better understood by English manufacturers of artificial teeth than by American dealers, and accounts for the fact that English

teeth are here frequently preferred to those of American manufacture. Much can be said in defense of this system, not that I would excuse the retention of all roots, but in many cases, especially in the front of the mouth, when they are giving no trouble, their retention is often attended with decided advantages: 1st, The patient is relieved of the pain and trepidation attended upon extraction. 2d, The teeth can be inserted without any retard. 3d, There is no absorption of the gum that will necessitate the construction of a new plate within a year. 4th, Teeth can be inserted whose natural appearance will deceive the most practiced eye. 5th, The tendency of the remaining teeth to approach each other, that so frequently necessitates the employment of artificial substitutes of unnaturally small dimensions, is effectually obviated. 6th, The remaining teeth do not suffer an apparent elongation and a real loss of solidity by the absorption of the gum and alveolar process. 7th (and most important of all), The original fullness of features and contour of the face do not undergo the change that invariably follows the extraction of several of the dental organs.

The objections—many of which are, by the way, invalid—to the retention of healthy roots are too well known to the readers to require recapitulation, but they fall far short, in my estimation, of outweighing the advantages acquired by its practice.

Without making a full confession of faith, I must admit that the horizon of my professional education begins to be beclouded by other heresies than those already promulgated; but to expose an entire creed in a single pamphlet too frequently produces a shock that is a death-blow to all hopes of proselytism. So, with an apology for having attempted to overthrow even one or two of the cherished dental penates, I tranquilly await any denunciation my tenets may call forth.

W. F. KELSEY.

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#### AMERICAN ACADEMY OF DENTAL SCIENCE.

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THE Fourteenth Annual Meeting of the American Academy of Dental Science will be held in Boston on the last Wednesday in October (October 26th), at 10 o'clock A. M.

The annual address will be delivered by Dr. F. N. Seabury, of Providence, R. I.

J. T. CODMAN, *Recording Secretary, A.A. of D.S.*

BOSTON, July 11th, 1881.

## REMOVAL OF A TUMOR.

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BY DR. W. E. PINKHAM, NEWARK, N. J.

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A BOY nine years of age was brought to me (in April, 1879) for advice in regard to a swelling of the inferior maxilla, from which an abscessed temporary molar had recently been extracted. The dentist who extracted the tooth assured his parents that the swelling would soon subside, as it was a simple abscess.

The tumor, when I first saw it, was dark purple in appearance and the size of an English walnut. It was almost devoid of sensation, even when I cut it through with a lance, which I did to find out the condition of the bone. From all the indications I concluded that it was a malignant growth, and advised a consultation with Dr. Garretson, of Philadelphia. He confirmed my diagnosis and advised an operation.

A meeting was arranged at my office for the following Thursday.

The patient having been placed under the influence of ether, an incision was made through the centre of the lower lip to the mental process, from thence below the lower border of the jaw to a point in close proximity to the facial artery. The flap was dissected up and held out of the way. The teeth in the portion of the jaw to be resected were extracted. Two cuts with a straight saw were made, one by the side of the left canine as far as the incisive fossa, and the other posterior to the right six-year molar through the alveola border. The dental engine, with a circular saw attached, was next used to cut through lengthwise of the jaw. This method of splitting bone makes a clean cut, leaving no ragged edges. It was skillfully performed, and the portion of bone removed with little difficulty. The flap was replaced and secured with pins. Bandages were applied, and the patient taken home.

We had fears for several weeks that a recurrence would take place. A large mass in the process of granulation formed, similar in appearance to the original tumor. The growth was so deceptive that two eminent New York surgeons pronounced it a recurrence, and said that there was little hope of saving the boy's life; but, notwithstanding these predictions, the mass began gradually to disappear, so that in one year after the operation the parts were entirely healed. Dr. Garretson, from his large experience in such cases, was sanguine that this would be the result.



I shall endeavor to fit an artificial denture to take the place of the parts removed as soon as the canine and bicuspid of the permanent set on the left side are fully erupted. I anticipate considerable difficulty in doing this, owing to the age of the patient and the peculiar shape of the parts to be filled. The tumor was examined under the microscope, and showed the shape and arrangement of cells peculiar to sarcoma.

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### A NARROW ESCAPE.

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THE following case is reported in the *London Lancet*, and should serve as another warning to those who administer chloroform :

" In this case I had no misgivings : the man had taken chloroform already four times, requiring an unusually large quantity to produce anæsthesia, and recovering from its influence very rapidly. Besides, my experience of the exhibition of the drug could be counted by the thousands, extending back to the days of the Crimea, and hitherto without a shadow of mishap. This time he took the anæsthetic better than ever, less than two and a half drachms proving sufficient. The same procedure as before was gone through. Rolled over on to his stomach, with a pillow beneath it to throw up the back ; the head nurse—a most careful, trustworthy person—took charge of the face to keep the mouth disengaged from the bolster, while I applied the iron, assisted by two or three other patients. A piece of oiled lint was then laid on the spot, and J. M.—placed on his back, his pulse and breathing being then both good.

" I turned from the bed and walked to the stove, a distance of about fifteen feet, to put down the iron, when a cry from the nurse brought me quickly back. Respiration and heart action had ceased suddenly and completely. Having first ascertained that the mouth and rima glottidis were free from mucus, the head was allowed to hang down over the edge of the bed for a few seconds ; then lifting the body on to the floor, a needle and thread snatched from a bystander were passed through the tongue, which the nurse held forward, while artificial respiration was vigorously carried on by compressing the chest walls : at the same time cold water was plentifully thrown on the body and ammonia applied to the nostrils. At the end of six minutes, when all seemed unavailing, I stopped for a moment to look at the patient.

" There was a something in his blue appearance that impressed

me with the idea that actual death had not yet occurred, and putting my ear to the heart I fancied a sound like a distant thrill or murmur could be detected. Artificial respiration was resumed, and in a few seconds more the heart's action was very distinct, but there was no attempt at breathing. Hard slaps, cold water dashed on face and chest, blowing violently down the fauces, were all tried in vain. It was singular to note the apparently dead body show its perception of injury by slightly moving the hand in the direction of the part struck. After the lapse of eight minutes a long and deep inspiration took place, then at an interval of eight or ten seconds another, and then others more frequently.

"The galvanic battery having refused to act the day before, it was presumed to be out of order, and had not been brought into the ward; but a thoughtful patient, ignorant of this, had fetched it, and having by this time fixed the wires, put one pole into my hand, which I placed on the epigastrium, directing him to apply the other to the nape of the neck. This he did so rapidly, before I had time to alter the regulator, that the whole current from fifty cells was transmitted, the machine happening to resume its proper action. J. M.—sprang up into a semi-sitting posture and exclaimed, 'Oh, dear! what are you doing of?' He was got back into bed just as the Local Government Board inspector, who was making his official visit, entered the ward. The time that elapsed from the moment of apparent death to his speaking was just ten minutes."

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#### HARVARD ODONTOLOGICAL SOCIETY.

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THE Third Annual Meeting of the Harvard Odontological Society was held on Saturday, July 2d, 1881, at the Atlantic House, Nantasket Beach, Mass.

The following officers were elected for the ensuing year: President, Eugene H. Smith, D.M.D.; Recording Secretary, Frederic E. Banfield, D.M.D.; Corresponding Secretary, Edward C. Briggs, D.M.D., M.D.; Treasurer, Frank Perrin, D.M.D. Prudential Committee—Frederic E. Banfield, D.M.D.; Eugene H. Smith, D.M.D.; Edward C. Briggs, D.M.D., M.D.

FREDERIC E. BANFIELD, *Recording Secretary.*

BOSTON, *July 4th*, 1881.

TWENTY-FIRST ANNUAL SESSION OF THE AMERICAN  
DENTAL ASSOCIATION.

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HELD AT IRVING HALL, NEW YORK CITY, JULY 12TH, 13TH,  
14TH AND 15TH, 1881.

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THE Twenty-first Annual Session of the above Association opened in Irving Hall at 11 o'clock A. M. on the 12th inst., Dr. C. N. PIERCE, Philadelphia, presiding.

Prayer was offered up by Dr. WETHERBY, of Boston.

The following is the

## PRESIDENT'S ADDRESS.

*Gentlemen of the American Dental Association:* We have met this year under unusual conditions, our Association having been convened almost a month earlier than has been customary in order that those of its members who wish may have the opportunity of accepting an invitation to attend an International Medical Congress meeting in London without absenting themselves from this our annual gathering. While this invitation to the dental profession in America indicates a change in the estimate of the American dentist, and should therefore be received with satisfaction and pleasure, yet, considered in connection with similar advances at home, it should cause anxiety as to the possible influence which it may have upon the future of our profession. While casting a retrospective glance to a period not far distant, and from thence following step by step each progressive effort, noting the obstacles that have been overcome and the successive heights attained, each giving a broader view and opening up a wider field of labor and thought, we cannot fail to see that there has been no more persistently indifferent and unappreciative class than those who now invite us to share in their deliberations. These overtures on the part of the medical profession are certainly gratifying and indicate that the dental profession has gained a definite position in the ranks of the healing art.

Anxiety for the future should always be greatest in the hour of prosperity or popularity. Heretofore, notwithstanding the lack of recognition, our progress has been steady. Will the prospective union or absorption lessen or increase our effort, retard or hasten our progress? Like all other organizations, one of two conditions awaits us. To avoid change is hardly within the range of possibilities. We must either progress or retrograde. Judging from the

history of parasitic existence it is certainly among the possibilities that degeneration may result from such a union with any other organization. "When an animal or plant attaches itself partly or wholly to another living being, and becomes more or less dependent upon it for support, it exhibits, as a rule, retrogression and degeneration. Degradation, wholesale and complete, is the penalty the parasite has to pay for its free board and lodging." Many animals which, in their youth, possess all of the animal functions, as a natural result of participating in what has been well named "the vicious cycle of parasitism," lose their eyes, legs, digestive system, and all of the ordinary belongings of animal life." Such, it is to be hoped, will not be the result with this body if, for the sake of position or progress, we unite with any other organization.

Don't understand me, friends, as intimating that retrogression would be an inevitable result of union, but only as indicating a possibility against which we should be on our guard. That we can meet with the medical profession to our and to their advantage I firmly believe. But to be thus profitable it must not depend on titles and degrees purchased or conferred, but resulting from an appreciation of the knowledge acquired by industrious, persevering and original research. The late movement on the part of some of the medical schools in instituting additional chairs for the purpose of giving instruction in dentistry would be entitled to more confidence and favor had the medical profession shown any appreciation of the requirements of the dentist, of the field for study which dentistry offers, of the fact that the organs and adjacent tissues with which we have to deal possess anatomical and physiological connections liable to a wide range of pathological sympathies and complications; that even in microscopic tooth-germs are wrapped up inherited physical, mental and moral peculiarities; that in no organs or tissues more than in the teeth is there a greater tendency to reproduce parental characteristics; in none are imperfections in structure and predisposition to disease more certainly transmitted; in none are systemic conditions more readily impressed, and that for the observation of these physiological and pathological peculiarities no occupation affords a better opportunity than that of the dentist.

That the medical profession has never, and does not now, appreciate the requirements of the dentist is made patent by the fact that upon a partial and very limited medical education its colleges are yearly conferring degrees in dentistry, with all of the rights and



privileges pertaining thereto, while the ophthalmologist, dermatologist, obstetrician and gynæcologist, as well as the aural surgeon, must each take a full course of medicine and receive the degree of M.D. before he can be recognized in either of the above specialties. Is there in the practice of any one of these specialties sympathetic nervous relations more serious than those accompanying many conditions of the teeth, and especially those occurring during the formative and eruptive period of dentition—a period during which it is an undisputed fact that the greatest number of deaths occur among children?

Twenty annual meetings have been held since this Association was evolved from the *American Dental Convention*. The pertinent inquiry now is, Have our yearly gatherings been sufficiently fruitful to compensate for the separation? A brief *résumé* of our work and growth would, if time permitted, be a matter of interest to the younger members, but we must be content with noting a few evidences of progress. Our meetings, which were at first largely occupied with papers and discussions on means and methods, with only an occasional paper beyond these limits, are now, in addition to such, treated every year to essays based on original research, indicating methodical study, a wider range of thought and a higher degree of culture. The sections of anatomy, physiology, histology and microscopy, of pathology, therapeutics and materia medica, of dental education and dental literature, have each, as they have in turn been called upon, responded with creditable reports upon these subjects, and of especial worth as indicative of future work and attainments.

While we note with pleasure what has been accomplished in the past, there yet remains a large field for investigation and an immensity of work to be done. Economy in time, by greater care in the selection of topics and limiting discussion on unimportant subjects, will greatly facilitate our proceedings and add interest to our sessions. In proof of the necessity of this, let me refer to an occurrence or two of last year. In one instance a large portion of one session was consumed in discussing the propriety of reinstating an old member, and in another two full sessions were occupied (the report occupying twenty pages of our published proceedings) in remarks largely confined to the relative value of adhesive and non-adhesive gold foil, when every skillful operator recognizes the fact that equally good and satisfactory work can be done in the majority of cases with both; that the results depend more upon the skill

and judgment of the operator than upon the material used ; and also that, however much we may be by education and experience attached to gold, we must admit that there are more teeth filled and protected with what are known as plastic fillings than with gold ; that an eclectic practice is to be preferred to one in which an exclusive and hurtful discrimination against any material of value obtains.

Among the subjects of importance to the public, as well as to the practicing dentist, there is one that has been almost wholly neglected by the numerous essayists who have contributed to our pleasure and instruction. I refer to that of *ætiology*—the science of the causes of dental caries. Little has been written and nothing systematized or formulated respecting the all-important factors in the production of the almost universal disease which results in the destruction of tooth tissue. It is true we constantly allude to caries of the teeth as being due to exciting and predisposing causes. We go further, and with much confidence state that the exciting cause is the presence of an acid saliva induced by local and systemic conditions—that the predisposing causes are vices of conformation occasioned by imperfect or improper nutrition during the period of calcification. These represent a very limited number of the various influences which are constantly operating against the durability of the teeth. With a more liberal education, and more time to devote to this line of investigation, I trust we shall much more fully appreciate hereditary, physiological, pathological and dietetic influences. We may derive valuable information from observations upon the lower animals, especially upon the effects of treatment of domestic animals—changes in food, habits of life, etc., etc.

The relations existing between the mandibular or lower-jaw movement and tooth-forms are not ideal, but real, and are dependent to a great extent upon the mode of use of the parts and the force exerted. It is also true that those animals which live upon the toughest and most solid foods have the most deeply-implanted teeth and the most effective arrangement for the replacement of tooth-structure when lost by wear. In the examination of the jaws and teeth of lower animals we find that with the simplest type of jaw-movement, which is that where the mouth is simply opened and closed in a vertical line without any lateral or horizontal movement, there exists the simplest tooth-form, and that with increasing complexity of the lateral movement there is an increased complexity of the enamel foldings, ridges and crests of the tooth crown. It is

also apparent that incisor teeth are partially or entirely absent in animals which have long, prehensile lips or probosces. It is more than probable that this undue development on the part of these organs, and the disappearance of the dental element, is due to the absence of function on the one part and to the increased function on the part of the soft structures. "There is then a constant relation between use and strength in the part used, which needs no other explanation than such as will recognize the force exerted by the muscles of any animal as a retroactive stimulus evoking development of strength, not only of the muscles but of the scleros, or hard tissues, whenever needed, and, conversely, causing degeneration or retardation of development in the parts not exercised."

The above facts, together with illustrations which may be deduced to sustain them, make it safe to conclude that the almost universal prevalence of dental caries, and many other dental deformities, is in a large measure due to the increasing use of soft foods and to a want of a proper use of the teeth in comminuting harder and dryer pabulum, the proper trituration of which would be an active stimulant tending to produce a healthier and stronger development of tooth-structure. A letter before me from that indefatigable worker, Henry Bergh, states that exclusive and continuous slop-feeding of cows not only loosens the teeth, but causes them to fall out, and tends to inflammation and sloughing of the gums. The experience of every practical dentist cannot fail to make him fully cognizant of the marked difference in the teeth of those who live upon dry solid food and those subsisting largely on fluids and semi-solids. Visits to the various institutions where the inmates are detained and protected offer excellent opportunities for the examination of the teeth and for noting the influence upon them of the warm drinks which soften and wash the food into the stomach without mastication.

The increasing care and trouble which a dentist experiences in the successful treatment of a young miss' teeth while she is preparing for competitive examinations and promotion at school: the exalted sensitiveness of the teeth during the period of gestation and lactation: the almost uniform certainty of the loss of two or more teeth by the average mother for every child nursed—these and many other conditions with which every observing dentist of experience must be impressed speak to the profession in unmistakable language of the inefficiency of all methods based entirely on operative skill.

In conclusion, I beg leave to offer the suggestion that the section

embracing aetiology organize a voluntary committee, who shall at once commence a careful and systematic investigation with the view of ascertaining, as far as possible, the causes which contribute to the almost universal existence of dental caries. I believe it quite possible for this body in a year or two to say to the public that there are certain physical, mental, moral and dietetic habits which are contributing, both directly and indirectly, in a large degree to the prevalence of this condition, which is so destructive of health and beauty.

#### PUBLICATION COMMITTEE.

The Publication Committee stated in their report that, in accordance with the instructions of the Association, they opened correspondence with different publishers regarding the printing of the transactions, finally accepting the proposition of the Trustees of S. S. White. Of the character of the work done by the Trustees of S. S. White the volume speaks for itself, but the Association cannot know how much it owes to them, and particularly to Mr. Hise, who had charge of that department. Without the very intelligent services of this gentleman the Association could not have so fine an edition of transactions.

*(To be continued.)*

#### DENTAL SOCIETY OF THE STATE OF NEW YORK.

THE following is the conclusion of our report of the meeting of the above Society, held at Albany May 11th and 12th.

#### ELEMENTS OF PROGRESS IN DENTISTRY.

Dr. S. B. PALMER read a paper on the above subject. We publish on page 289 of this number of the MISCELLANY an article which Dr. Palmer has kindly handed us, entitled "The Ultimate Elements of the Teeth and Bones of the Face." As in this paper are embodied many of the facts and thoughts contained in that read at Albany, we withhold our reporter's notes of the latter and give the discussion which took place.

Dr. W. C. BARRETT said, that if, unfortunately, some of the opinions of which Dr. Palmer was the author had not fallen into bad hands, it would have been much better to-day than it is. He (Dr. Barrett) did not wish it to be understood that he was a believer in the so-called "new departure." Dr. Palmer was always regarded by him and by the members of the Society as being a man who



desired to see things in their proper light. But under the cover of some opinions that Dr. Palmer has brought forth there have been such absurd and ridiculous statements made that it has thrown a sort of bad odor over the whole thing. But in the Dental Society of the State of New York the matter can be taken up and considered without prejudice. The objections he (the speaker) has to Dr. Palmer's theories consist in the belief that the Doctor, in a measure, confuses cause and effect. He does not go back far enough. He does not reach the fountain-head. He regards electricity as an entity—as something separate from the other forces of Nature. There is but one force in all Nature. There is but one unit. As matter is entirely indestructible, so is force. We may have it appear in different forms, according to circumstances which may evolve it. We may have the transference of force, we may have the one changing into the other, but it is all the same force from the beginning to the end. It is all one: and when you attempt to consider electricity as separate and distinct—as an entity, aside from light and heat—you get on the wrong track. Every molecular change which takes place within the vast realm of Nature results in some force. It requires force to put the molecules in motion: it requires force to produce molecular motion, and the result is force. It is simply change. The different forms under which force may manifest itself are perfectly familiar to all. For instance, we have in the electric battery the transference of chemical force into electricity. Then we may have in the electric light a plain illustration of the change of electrical force—speaking of galvanic and electric force as one—into light. We have also the transference of light into electricity and of light into heat. In his (Dr. Barrett's) opinion the force which animates every *age*, every "I," is but another form of manifestation of that force which keeps everything in motion in the world. Those who have engaged in vivisection to any extent, and have applied a weak battery to the subject, will have seen over and over again instances of the transference of electrical force into nervous force. The force called electrical or galvanic is, after all, nothing but galvanic. It is all one, except in its mode of manifestation. If we have an electric current in the mouth, it is the result of some molecular change. It all must go back to the fountain-head of all force. So when electricity is spoken of as an entity, and as producing certain manifestations, there is a mistake somewhere. A piece of iron cannot be bent without producing an elec-

tric current. As no matter can be destroyed, so no force can be destroyed.

Dr. W. H. ATKINSON was convinced that they thought more nearly alike than they talked, and if they had a nomenclature that could be defined better, they would find less difference in their views. He agreed with nearly all that had been said by both Dr. Palmer and Dr. Barrett. Dr. Barrett repeatedly spoke of molecular motion and molecular change, which is all very beautiful if they only knew what he meant.

He (Dr. Atkinson) had repeatedly said that the inception of mischief was in the imperfect construction of the elements of the teeth themselves. If teeth were perfectly constructed, nothing but mechanical or very powerful chemical action could injure them. \* \* \* It is the fashion often, in connection with things not understood, to ask Why? He would council them to ask, instead, How? Look and see if you can get at the How, and the Why will then be a finishing quantity. When you come to what is called the Why, there is a sub-Why lying behind and beyond. \* \* \* Just as we depart from the enamel of the tooth do we find more and more complication of the elementary constituents of the dentine and of the secondary dentine, and then the contents of the tooth, the dental fibrines and the pulp, going all the time to a higher and more complicated combination of molecules. If dentists would put their feet on the threshold of the temple of light and stand there disenthralled from the fetters that have kept them bound, they must aim at and strive to reach the tip-top of sterling excellence. They need to study the beautiful constructive arrangement of molecular activity so clearly presented by Dr. Barrett, and yet learn that they are not mere mental gymnastics, but mental gymnastics that are capable of being recognized by science, and then they should be careful to criticise their own mental processes with the same sharpness as those of their fellows.

Professor FRANK ABBOTT said that Dr. Palmer, in his paper, asked why a tooth would decay more rapidly with a loose gold filling in it than it would with any other loose filling. He (Dr. Abbott) maintained that that was not the case. He had never seen anything of the kind. Possibly he might be mistaken.

He was glad to know that Dr. Palmer admitted that no electrical motion takes place in a tooth if the filling is solid—if the tooth is properly filled. He (Dr. Abbott) accounted for the decay of teeth

without the system of electricity. In the first place there must be something there in the form of an acid to produce a dissolving of a certain portion of limes of salt. The moment the living matter is exposed there is irritation, and the irritation proceeds beyond the destruction of the tooth-substance proper, and disturbance goes on far into the tooth, much further than the decay of the tooth itself shows. That is very plainly to be seen by the microscope.

## SECOND DAY.

### CASES IN OFFICE PRACTICE.

Dr. TENISON reported a case of a gentleman who had some trouble with his right eye. He had been under the care of an oculist for two years, and had almost lost his sight. The trouble was accompanied by a great deal of twitching of the eyelids. He had also some pain from the buccal root of the superior molar on the opposite side. The patient came to him (Dr. Tenison) suffering very much from the tooth. He found that there was an abscess, and opened it with a lancet. The pain accompanying this operation was so great that the patient almost fainted. In the course of an hour or so the pain ceased, and in the morning following the sight to his eye had returned almost completely, and the twitching of the eyelid had stopped. He (Dr. Tenison) had seen the patient several times since then, and he was almost entirely relieved from the trouble in his eye.

Dr. WINNIE said that about six months ago a lady came to him with a severe pain on the right side of the face, and with the right eye swollen up considerably. He examined her teeth and found nothing wrong about them except the second bicuspid root, which was a little tender and which he removed. About a fortnight after she returned, saying that the former operation relieved her temporarily, but she still suffered intense pain. He thought that possibly there might be a disease of the antrum, but, as he had never seen disease of the antrum without there being a discharge somewhere, he questioned that theory. On searching, he found an upper molar which was quite loose. He extracted that, thinking that by that means he might possibly get a discharge. He failed in this, and then took the patient to a celebrated surgeon of the city and asked his opinion. He pronounced it to be disease of the antrum. He would not advise an operation. The lady was advised by some

other friends to go to another surgeon, and he also pronounced it disease of the antrum. The surgeon to whom she went last performed an operation on her which the speaker (Dr. Winnie) witnessed. The root portion of the upper maxillar was removed, and then it was discovered that the patient had a tumor on the brain, and not disease of the antrum at all. The lady is now lying in the hospital with her face swollen beyond recognition, and suffering intense agony.

#### RESTORATION OF CROWNS.

Dr. E. M. HOLMES then read a paper on the subject of the restoration of crowns of teeth.

A short discussion followed, after which the election of officers for the coming year was proceeded with, with the result as given in the June number of the MISCELLANY.

The meeting then finally adjourned.

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### MASSACHUSETTS DENTAL SOCIETY.

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THE Sixteenth Semi-annual Meeting of the Massachusetts Dental Society was held in Codman & Shurtleff Hall, Boston, on June 9th and 10th. The meeting was called to order by the President, Dr. G. F. Waters. Records of the last annual meeting were read and approved.

Dr. D. G. HARRINGTON, of Boston, read an instructive essay entitled "*Artistic versus Mechanical Dentistry.*"

The following resolution was presented and passed :

*Whereas*, A petition has been presented to Congress asking for the calling of an International Commission to consider and agree upon standard methods of testing visual acuteness and color-blindness, and standard requirements of these necessary qualifications in the navies and merchant marines—Voted that the Massachusetts Dental Society heartily approves of the proposed International Commission, and hereby directs the Secretary of this Society to transmit the vote to Congress when next assembled.

At 2.45 the afternoon session was held. Dr. A. M. DUDLEY, of Salem, who was unable to deliver the last annual address, delivered it to-day. Dr. J. H. KIDDER, of Lawrence, read an interesting essay upon "Pain."

At 6 P. M., as per vote, the Society met in the dining-rooms at



Young's Hotel, where the members partook of a bountiful dinner. The exercises consisted of an appropriate speech of welcome by the President, Dr. G. F. Waters. Then the toast-master, Dr. A. M. Dudley, called upon the prominent members of the medical, dental, legal and clerical professions, and received appropriate responses.

On June 10th the morning session was called to order by the President. The following resolutions were presented and passed :

*Resolved*, That it is the sentiment of the Massachusetts Dental Society that some enactment should be passed by the Legislature of this State, which will serve as a protection to the general public from the baneful effects of charlatanry and ignorance. *Resolved*, That a committee of five members be appointed to secure the co-operation of other societies and petitions from dentists and the public for the furtherance of this object. *Resolved*, That they be empowered, in behalf of this Society, to make such appeal to the Legislature as will tend to the passage of a statute regulating the practice of dentistry. Voted the resolutions be adopted.

The Chair appointed as committee Dr. A. M. Dudley, Salem ; Drs. E. G. Leach and L. D. Shepard, Boston ; Dr. R. R. Andrews, Cambridge ; Dr. J. T. Cochran, Boston.

Voted that the sum of \$50 be expended by a committee of three, consisting of the Librarian and two others, for the improvement and use of the Library. Committee—Drs. J. T. Cochran, D. M. Clapp and T. H. Chandler, Boston.

Adjourned at 1.25 P. M.

W. E. PAGE, *Secretary*,  
3 Dexter Row, Boston.

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## EDITORIAL NOTES.

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### THE AMERICAN DENTAL ASSOCIATION.

IN his address the President of the American Dental Association made some remarks on the invitation which has been extended to American dentists to attend the International Medical Congress being held in London. Dr. Pierce called attention to a contingency which, in the event of a recognition of dentists by the medical profession, may possibly occur. It may happen, says he, that dentistry will be a parasite to the medical profession. "Judging from the history of parasitic existence, it is certainly among the possibilities that degeneration may result from such a union with any other organization."

Among the possibilities—yes ; but among the probabilities—no. Dr. Pierce, although he stated this view of the case as though he were a pessimist, is yet sufficient of an optimist to fear nothing of the kind. American dentistry is too much a living, growing thing : its limbs are too vigorous even to become a parasite. Its methods of investigation are pre-eminently independent. Too much new, swiftly-coursing blood is being infused into its veins to permit of its ever becoming a parasite. Where are the evidences that it is nearing its dotage ? Where do we see signs of halting or resting on its oars ? All along the line we see, instead, a pressing forward toward a mark. We do not blame Dr. Pierce for the introduction of this line of thought. It was salutary, or, at the least, harmless. It showed us a new side to the question ; it exhibited the fact that the worthy President of the Association came to the meeting with an idea, and that was something.

It has been said very truly that it would be a somewhat unseemly performance for the dental profession to clamor too loudly for recognition by the medical profession. The higher must beckon the lower when the lower are fit to take an upward step. There is sense in the remark. The medical profession have now beckoned us. They want us at London. They see the strides that dentistry is making, especially American dentistry, and they realize what is due to us for the energy we have thrown into our work. While on the one hand Americans would despise any patronizing tendency that might be shown by the English physicians, we may as well recognize their courtesy and appreciate the wisdom of their move.

Who among us will be injured by contact with the stronger body of physicians ? Who among us will feel that our goal is reached, and that hereafter we will hang to the skirts of those who have invited us to their board ? Echo answers—Who ? The fact is, having tasted a little of the sweets of recognition by the medical profession, we find that, after all, it is not so marvelously invigorating. We turn away, and find new energy, fresh invigoration and further determination, not in the expectation of an acknowledgment that we are doctors of medicine, but in the beaten track that lies before us along which we have been pressing for years, at the end of which we know there is an ideal of perfection. A desire to reach that is our prime desire. A desire to be reckoned as belonging to a branch of medicine is a secondary one.

## ÆSTHETIC DENTISTRY.

The time is coming when much will be said in our dental journals and at meetings of the dental societies on the subject of art, or, to use a more comprehensive term, æstheticism in dentistry. Workers in a new field of labor have little opportunity to devote much attention to a development of art in their performances. They are obliged to spend a large proportion of their time in acquiring that deftness and experience necessary to exalt them above those who are mere beginners. The pioneers in the field of dentistry took long years to clear the way of prejudice and to acquire knowledge which was open to them only as it is open to any searcher. But, now that these pioneers have done their work—now that the present generation is stepping into their shoes, beginning where they left off and profiting by their experience—they find time to turn their attention to the æsthetic side of dentistry. Just as one pioneer could distance his fellow by finding out some facts which are now accepted as first principles, so to-day we have pioneers in the æstheticism of dentistry who are finding out certain facts and formulating them into words and phrases which in the near future will be accepted as first principles.

Æstheticism is not something to rail at. It is true we have from London, England, some extraordinary stories concerning the doings of a queer clique called æsthetes. They are portrayed as gazing into lilies or sunflowers; as being "quite too, too intense;" of craning their swan-like necks to an abnormal length, and of doing and saying many other strange things. But, after all, this clique is very much the result of the imagination of the fertile brain of an artist who is connected with the staff of the classic *Punch*. The fact is, æstheticism is caricatured and not sketched in the comic paper we have referred to. We should not allude to the matter here at all, only that these particular squibs at the æsthetes are copied into hundreds of newspapers in the United States, and tend, necessarily, to corrupt the public appreciation of the true meaning of æstheticism.

Æstheticism is the science which treats of the beautiful in perception—the science of taste. The true æsthete is one who has a taste for the really beautiful—a distaste for, and ready perception of, incongruities. It is not too much to say that the man or woman who has an æsthetic taste would object strongly to have his or her front teeth so filled with gold as to be visible. The æsthete would toler-

ate gold as a stopping to the teeth only because of its being the best filling extant. The mouth is the place for regular, natural-looking organs of mastication, and not for jewelry. If artificial teeth must be used, there will not be in one or two which are more exposed to the public eye holes drilled that may be filled with gold for the sake of showing off the auriferous element in one's head.

There is much to do to teach the people the first principles of æsthetics as applied to dentistry. May we be pardoned if we say that dentists themselves have much to learn in this connection? The man or woman who has, in any respect, a look that is in the least repulsive, whose teeth wear an unnatural and inartistic appearance, does a continual wrong to the community, whose senses are jarred by such an appearance. As civilization advances, men will realize more than they do now that no one can be independent of his neighbor—that the dwellers on this planet should dwell in communion, and each seek to do the best he can to gratify the æsthetic taste of all who surround him.

#### VOX POPULI, VOX DEI.

A valuable article which appeared in the June MISCELLANY, written by Dr. T. F. Chupein, concluded with the following words: "That it (cohesive gold) has been received in such favor by the majority, and taught so almost exclusively by all the colleges of the country, seems an indication of the truth of the aphorism, *Vox populi, vox Dei*." In no sense do we intend our remarks to be a criticism of Dr. Chupein when we say that this aphorism is rather misleading. The voice of the people is not necessarily the voice of God. We need not go into an argument on abstractions, as, for instance, for the purpose of proving what God is. It will be sufficient for us in this case to take the word to mean the embodiment of absolute good. *Vox populi, vox Dei* is usually intended to convey the idea that that is right, or, in other words, absolutely good, which the voice of the people declares in favor of. In other words, the voice of the people is coincident with the voice of God. We should like to see the nation, the State, the county or the city where such is the case. The voice of the people declares in favor of the use of tobacco; in favor of letting alone political jobbers who rob the tax-payers. Surely this is not the voice of God. Undoubtedly the voice of the people declares in favor of using cohesive gold for the stopping of teeth that are decayed. If cohesive gold is best



for this purpose, we may assume that in this matter the voice of the people is the voice of God. But we must not assume that the *vox populi* is always wise and good enough to be declared to be the *vox Dei*.

#### THE DELAVAN COLLEGE.

It would be as well for the dentists who possess diplomas issued by the Wisconsin Dental College, located at Delavan, to be marked men. There is something exceedingly cheeky in the remarks of a circular we have received, issued by "the faculty" of this so-called college. "Believing they have as many legal and moral rights as other citizens," they intend to do this and that. What are "legal and moral rights?" They are two very different things. A man has a legal right to drink whisky, neglect his work and ruin his home. A man has a legal right to pull all the teeth out of a man's head, be they good, bad or indifferent, so long as the patient consents. But morally such a whisky-drinker and such a pseudo-dentist have no right to commit such reprehensible acts.

It may be that the Delavan Dental College has a legal right to do what it has set out to do. No one can prevent it from sending out "in a cylinder box by express, C. O. D. \$12, an elegant honorary diploma and degree of D.D.S., etc., etc.," to all applicants. But public opinion is becoming too enlightened for such "diplomas" to be worth the "parchment 22 x 17 inches" they are written on. It is the duty, not only of all respectable and widely-read dental journals, but of all dentists, to exert their influence in the direction of rendering valueless these diplomas.

What about the moral right of these members of the "faculty" of the Delavan College? Their prime object is, doubtless, to secure as many sums of \$12 as they can squeeze out of the dentists of the country. If successful, the harm resulting to the public will be incalculable. The tendency of the present generation of dentists is to demand higher attainments and greater efficiency. The age of the barber-dentist and tooth-carpenter is past, especially in the United States. Almost every State is awaking to the fact that the public must be protected against fraud. Men are obliged to show that they are possessed of knowledge such as will fit them for the work of dentistry before they can open offices and hang out their signs. If such colleges as this upstart at Delavan are to flourish, where will our progress be? Every such money-making machine is a wolf in sheep's clothing—a sign of retrogression. Where does

the moral right of such men come in to scatter misleading diplomas over the land? No dentist who is honest would patronize these men. So it amounts to this—their diplomas will merely act as a covering for the ignorance and the desire to gull the public of the barber-dentists. Where there can be any moral right for citizens of the United States to wreak vengeance on the public and cover up the blackest ignorance with 22 x 17 inches of parchment we altogether fail to see.

No one expects to shame these Wisconsin college men out of their tricks. To maintain their institution is so inexpensive a piece of work, and needs so little outlay, that we need not be surprised if they continue for some time to issue and advertise their D.D.S. degree. It is public opinion, and that alone, which can eventually stamp them out and render their work abortive.

#### LADIES WITH CAUSTIC PENS.

There are some ladies who regard men as tyrants. They are never happier than when writing to the newspapers, declaring that the women in the United States are in as abject slavery as were the negroes before the war of the rebellion, and that the way these poor feminine objects are treated is a disgrace to civilization. A paragraph in a newspaper which has any special bearing on some supposed wrong done to the women of the country is sufficient to open wide the mouth of one of these curt, vinegar-visaged ladies, and she forthwith pens as sour a letter as she knows how, and sends it to the editor.

A short time ago the Dean of the Dental College of New York City was applied to by a lady to be allowed to become a student. Dr. Abbott informed her that she could not be admitted, as there was a rule against it in the College. A reporter of a New York daily newspaper heard of the lady's application and the Dean's reply, and wrote an article on the subject. One of these ladies to whom we have referred, who is ever ready with a long pen, wrote to the daily newspaper a long letter about the wrongs which are constantly being done to women by all men in general, and by deans of dental colleges in particular. She assailed the dental profession with her wordy shafts, as though it was the most despicable and tyrannical profession extant. She accused them of being exclusive and trying to keep to themselves the emoluments to be secured by the dentist.

All this kind of nonsense is very cheap and absurd. If a woman

wants to be a dentist, there is no one who will prevent it. Surely a college, which is no way a State institution, may adopt a rule to exclude ladies from its advantages if it chooses. If the proprietors of any school decide to devote their attention only to the instruction of boys, who has any right to complain? There are colleges which a lady may attend and study dentistry in. The avenues of the profession are not closed to her. The only thing is that there are some doors which are reserved for gentlemen and others through which she is welcomed. There is in some ladies a masculine obtrusiveness (we hope no man will be insulted by the phrase), and unless they can go just where, when and how they like, they create no end of fuss and declare that they are undergoing a specially ignominious form of slavery.

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### PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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IN the *Cosmos* Dr. James Truman says some wise things on the æsthetic in Operative Dentistry. The subject is not now dealt with for the first time. Many articles have been written for the dental magazines, and some read before various societies on art in dentistry, which amounts to about the same thing. We say that art and æstheticism in dentistry amount to about the same, knowing that this remark is open to criticism. There is, we admit, a wide difference between art and æstheticism, but neither of them have, so far, been developed very much by the dental profession, and consequently the divergence which may be expected to exist half a century hence between the two is not so apparent to-day as it will be then. But, after all, if a man sits down to write an essay on the development by the profession of a higher ideal—a nearer and truer approach to Nature in his work—it might as well be entitled "Remarks on Dental Art" as "Remarks on Dental Æsthetics." Dr. Truman is very severe, but perhaps not more severe than the case demands. He says: "The dentistry of the present is essentially, in many of its manifestations, barbaric. It is the unrefined expression of the mentality of the bench-worker, not yet advanced through the natural siftings to a higher condition, and hence we witness those fearful montrosities in both sections of our art, but especially in that of the mechanical branch."

Dr. W. C. Barrett has a valuable article on "Hyperidrosis." An article read by Dr. C. W. Stainton, of Buffalo, before the Eighth District Dental Society of New York is also given. It is a reply to the question "Is dentistry a specialty of medicine?" Nowhere does the writer give a decided "no;" but at the same time his arguments tend decidedly in that direction. He says: "I should be sorry to see any formal recognition of us by any respectable medical body as special practitioners of medicine. Of course, it is very easy to say that we are engaged in the work of alleviating pain and disease. That is very true; but so are that vast host of domestic practitioners—the wives, mothers and nurses of the world; but they are not to be called either general or special practitioners of medicine." In his concluding remarks Dr. Stainton says: "We make a mistake in asking or demanding anything. We do not think more highly of a man because he calls attention to his temperance, honesty and truthfulness. The agitation of this question is on the wrong side. It is in our own ranks instead of in those of the medical fraternity. Let us not be eager to extend our hands, but rather wait for other hands to reach down for us and bid us come up higher." The Doctor is a modest man. We should very much like to shake hands with him.

The *Dental Register* has an article by Dr. W. P. Dickinson entitled "An Ideal." Undoubtedly the Doctor has some ideal before him which he desires to place also before his readers, but he is a very long while getting at it and letting us know just what it is. It is evident, however, that the Doctor is striving in the direction of many good things. He wants to see an ideal profession. He himself, as all who know him are aware, is not guilty of the unethical practices which he denounces, and which are weighing the profession down and keeping it from reaching the desired ideal. He wants to see ignorance give place to knowledge and experience; a spirit of mercinariness to a desire to study the real interests of patients; lack of moral character to possession of moral character; the filth engendered by using tobacco and intoxicating liquors to the courtesy of cleanliness; quackery and malpractice to competency—in short, the Doctor wants to see a general revolution worked in the profession.

We are pleased to see in the *Herald of Health* an article on "The Teeth and their Relation to Health." This journal is in no sense devoted to dentistry, and deals with the teeth only so far as they have a relation to the general health of the system. The writer of



the article commences by calling attention to the ignorance which prevails among the masses in regard to their teeth and the service they are intended to perform. "Just as Dickens' hangman could not see that man is fit for something much better than hanging, so the people fail to realize that teeth are fit for something much better than being pulled out." The writer is bitterly opposed to false teeth. To him "there is something revolting, something ghastly, in removing all one's teeth and putting in the mouth a plate on which are fixed pieces of porcelain to serve, and that inefficiently, the purpose of natural teeth." Some timely hints are given to the reader, and, considering that the *Herald of Health* circulates among unprofessional readers, it is to be hoped this article will do good and aid dentists, if even but a little, in their struggle to educate their patients up to a due appreciation of their teeth.

The *American Pulpit and Pen*, under the heading of "Health Hints," gives an article on the teeth. It is elementary, and consequently capable of being easily understood by the readers of the journal.

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#### ADVICE ASKED FOR.

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##### EDITOR OF JOHNSTONS' DENTAL MISCELLANY:

*Dear Sir*—I wish to call the attention of your readers to a case in my practice and ask for suggestions and advice.

About ten months ago a young man of twenty-one or twenty-two came into my office with a right superior lateral incisor which had just been broken off an hour before by a kick from a horse. The fracture was below the gum on the labial surface about one-sixteenth of an inch, running upward and backward to about the same distance under the gum on the palatal surface, where the crown hung by the gum. I removed the crown, extracted the nerve, bored a hole in the fang, and replaced the crown, into which I had screwed a 22-carat gold pivot, adjusting the crown with strong cement. The crown still adheres nicely and firmly to the root, but the tooth has become looser, until now it appears that there is another fracture toward the apex of the fang.

Wherein lay my fault and what can I do to save the tooth?

I forgot to state that the patient is a healthy young man of excellent habits and very cleanly.

Suggestions from your readers will be gratefully received.

Yours faithfully,

J. H. H.

BOOK NOTICES.

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A DIRECTORY OF THE PRACTICING DENTISTS IN THE STATE OF TENNESSEE, JANUARY 1ST, 1881. Compiled for the American Dental Association by Henry W. Morgan, M.D., D.D.S. Nashville: Published by Marshall & Bruce, Stationers, 1881.—This book contains the names of three hundred and thirty-one dentists—quite a small number for the State when compared with New York City and Brooklyn, where we have perhaps about seven hundred in practice. Dr. Morgan deserves credit for the work done here, and his example should be followed in every State. We took occasion last year to urge upon the dental profession the importance of work like this: First get the list, and then never rest until every dentist in the State is brought under the influence of the Society. A society embracing only one-fourth or less of the dentists in any State may be very pleasant and interesting, and perhaps more agreeable to the few who attend, but it utterly fails to accomplish what ought to be the work of a State Dental Society.

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PROFESSOR MAYR'S CRITIC.

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IN the MISCELLANY for July we presented to our readers some remarks made by Mr. Fletcher, of Warrington, England, and the editor of the *British Journal of Dental Science* on Professor Mayr's article, which appeared originally in our April issue. Mr. Fletcher writes further as follows:

*"To the Editor of the British Journal of Dental Science.*

"SIR—In reply to the remarks made on my criticism of Mr. Mayr's paper on the 'Chemical and Physical Effects of Fillings on the Teeth,' it must be remembered that some people still believe all matter printed in a scientific or technical journal to be trustworthy and reliable. For these people the statements made by Mr. Mayr would be misleading.

"It is unfortunately too common for members, especially of American societies, to get up and talk for the sake of talking or with the object of getting their names advertised. A careful examination of many of the papers read before American dental societies will show this point clearly. I refer more especially to

American societies, because this evil is more apparent in America than perhaps in any other country. Ideas are exalted into facts, and statements are made which, as in Dr. Mayr's case, are not facts, and are certainly neither the result of experiment nor of knowledge.

"That Mr. Mayr is not a dentist is no objection whatever. Many, if not most, of the valuable inventions at present in use are the ideas of outsiders, who bring new brains, untrammelled by routine and habit, to bear on what is wanted. Their results are, however, valuable only when correct.

I am, etc.,

"THOS. FLETCHER.

"WARRINGTON."

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### THE REV. MR. PENTECOST'S DENTIST.

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A DENTAL suit brought on July 6th before a jury in Justice Adams' court, Hartford, Conn., has excited great interest, both from a professional and personal point of view. The Rev. Hugh O. Pentecost, now of Brooklyn, N. Y., sought the services of Dr. J. M. Riggs, when he was here serving as pastor of the South Baptist Church, and had, as he claims, his teeth treated for the removal of tartar. Dr. Riggs, however, says the treatment was to cure a disease considered by the profession incurable until the Riggs process, now known throughout the country by dental professors, was discovered. The disease is described as consisting first of inflammation and absorption of the gums. The second stage eats away the upper edge of the jaw-bone. The third stage absorbs the bone about the socket, the teeth loosen, a pressure is extended, and, as it reaches the stomach, vitiates the secretions and tends to undermine the system. For his treatment of Mr. Pentecost his charge was \$100, though the Doctor has frequently received as much as \$300. An offer to pay \$25 was declined, and the suit followed. There have been several experts examined on the Riggs side of the case, including a Harvard dental lecturer. The jury gave a verdict for the plaintiff for \$75 and costs, the whole amounting to over \$200, including counsels' fees.—*New York Times*.

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MANY of us feel life to be so short that we want to begin it at the earliest possible moment, little thinking that by beginning so early to tax our power in the race for learning, position and wealth we are already curtailing that life which we feel already to be too short.

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*September*, 1881.—No. 93.

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RESTORATION OF CONTOUR THE ONLY WAY TO KEEP  
PERMANENTLY SEPARATE THE MARGINS OF EN-  
AMEL OF THE PROXIMATE SURFACES OF THE  
TEETH AND PREVENT RECURRENCE OF DECAY.\*

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BY DR. MARSHALL H. WEBB.

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RESTORATION of the contour of a part or parts of the crown of a tooth signifies not only the building out and finishing of the gold to the line that defined the figure originally, but by it is meant the knuckling-up of the tooth restored to the one adjoining in such a manner that the margins of enamel may be free from contact, and that food cannot be forced between the teeth from the masticating surface.

For the restoration of contour it is necessary to gain space to prepare the cavity, pack the gold and finish the filling. This must be done either by wedging at the time of performing the operation or by previously pressing wood, linen, tape or cotton between the teeth. After sufficient space has been made in this manner, white gutta-percha should be placed in the cavity and between the teeth, and remain a day or two, or till the irritation incited by the wedging has passed away. Teeth ought not to be separated by rubber, because of the irritation it induces. It is oftentimes best to place a

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\* Read before the Connecticut Valley Dental Society.



wedge of orange-wood between the teeth, even after having pressed them apart, not only to gain more space than that had from previous wedging, but to arrest the tendency of their approaching each other, and to steady the organs for the performance of the operation, particularly if the irritation from the slow wedging has not passed away so as to admit of the insertion of all, or almost all, the gold by the aid of the mallet.

Space enough to insert and finish fillings may be gained with less difficulty by the rapid wedging of the incisors than of the bicuspid and molar teeth, especially when the cavity extends almost to the margin of the cementum, or the teeth are firmly set in the alveolar process ; however, in these and other cases, the gold should be built into and from the starting-point, along the cervical wall, and to the part where the convexity of the filling must be gradually increased. When this much of the gold has been inserted with the mallet, and smoothly finished with fine separating or other files, a wedge of orange-wood ought to be inserted between such gold and the tooth adjoining, and sufficient space thus secured to enable the operator to so complete the operation that there shall be no space between the teeth, except at and near the necks. Unless separation by pressure is made in some such manner as indicated, gold cannot be so finished as to have the teeth come closely together and prevent the wedging of food between them, except, perhaps, in the case of a young person, when the space left from finishing the fillings by fine files and emery-cloth or paper may again close. Pressure ought not to be too long continued or rudely made, else circulation in the capillaries and protoplasmic bodies of the pericementum may be so interfered with as to prevent return of the parts to the normal condition after the wedge has been removed.

After sufficient space has been gained, the rubber-dam should be applied to the two teeth separated by pressure and the tooth adjoining each, that those pressed apart may not come together during the performance of the operation or insertion and finishing of the filling, and that the organs may be the better operated upon. A cavity within the proximate wall of a bicuspid or molar tooth should be opened into from the masticating surface, excepting in rare cases, because, even when but little tissue appears to be disintegrated, this surface would be almost reached upon the perfect removal of the decalcified tissue, and the plate of enamel be liable to fracture if hard substances were to come in contact with it during mastication

of food. It is far better to cut away the enamel between the cavity and masticating surface than to remove tissue from the entire proximate wall ; besides, a clearer view is thus had, and the whole operation can be performed in a more satisfactory manner. The sulci and fissures are usually imperfect, and should be prepared and filled in connection with, and at the time of, the performance of the operation within the proximate wall.

That operations may be successful, each and every cavity must be so prepared that no disintegrated tissue remains, except a little discolored dentine just over the pulp, which should be left for its protection. The margins ought to be evenly and smoothly finished with fine, sharp burs, files and emery cloth (the edges may be beveled in some cases, but not rounded), and a groove should be cut in the dentine along each wall of the cavity. This groove should be about a sixty-fourth of an inch deep, and must be made in the dentine just within and near the line of both the buccal and palatal or lingual portions of enamel, and ought to extend from the masticating surface to the cervical wall, which should not be cut in that manner (excepting in some cavities in the incisor teeth), because of there not being such a body of tissue at that part as to make it safe to remove any of it for the purpose named. In the preparation of a cavity in the proximate wall of the enamel of a bicuspid or molar tooth enough of the tissue near both the buccal and palatal or lingual walls must be cut away to so restore the contour of the parts, and finish the filling as to keep the margin of enamel free from contact with the tooth adjoining. This is the only way to keep permanently separate the margins of enamel of the proximate surfaces of the teeth and prevent recurrence of decay.

After the preparation of most cavities, particularly those that are deep, carbolic acid ought to be applied, to serve not only as a disinfectant, but also to coagulate the protoplasm of the ends of the fibres in the dentinal canaliculi and partially obtund sensation. In those cases where thermal changes may produce more than the usual shock in healthy tissue after the gold has been inserted or the operation completed, oxychloride of zinc ought to be placed in the bottom of the cavity as a non-conductor of the currents, incited by heat and cold in the dentinal fibres.

When a cavity within the proximate wall of a bicuspid or molar tooth has been prepared as described, a starting-point should be

made in some part of the cervical wall and in that portion of the dentine which shall be the safest along the boundary between it and the enamel or cementum. This point, in which to start the filling, should only be deep enough to retain the small pieces of gold first introduced while other pieces are being built upon them, and the filling carried along to the groove in each wall of the cavity. The gold ought to be built against every portion of the dentine, packed as perfectly as possible along the enamel and a little beyond the margins, and carried fully to the line that originally defined the contour of the part. To thus perform an operation, it is necessary to build that part of the gold nearest to the buccal and masticating surfaces against the proximate surface of the adjoining tooth. By performing this operation with the electro-magnetic mallet the passing of the packing-instrument from off the edge, against or over which the gold is being placed, may not only be avoided but the surplus material can be so trimmed away during the performance of the operation that comparatively little trimming is afterward necessary.

Cohesive gold foil, Nos. 30 or 60 for large, or foil folded to Nos. 16 or 20 for small fillings, and not touched with the fingers, ought to be used in the performance of all operations, and should be made compact by the use of the aid of the electro-magnetic mallet, when it is carefully operated, especially in the cases just referred to and those where frail edges of enamel are to be supported and protected. All gold should be cohesive, particularly where a mallet is used, so that each piece may remain just where it is placed, and also that the filling may always be one and inseparable. When foil has been so impacted that the substitution for lost tissue is complete, a fine saw or file should be used to cut away the surplus material to the prepared edge of enamel against which the gold is placed, and to aid in shaping the filling like the original contour of the part, after which narrow strips (a line or an eighth-of-an-inch wide) cut from fine emery-cloth or paper should be so manipulated as to properly finish the surface of the gold.

When this has been done and the rubber-dam removed, the finishing should be completed by the use of fine pumice and silex on linen tape. The gold at the masticating surface should be trimmed down with fine burs and made concave (or contour, in such case also); that is, finished down to represent the original figure or the outline of the part operated upon. The gold should be so placed

in the cavity as to be flush with the prepared margins of the enamel, and made concave when such concavity is indicated. Fine burs should be used for trimming and shaping such fillings, and also the palatal surface of the gold in the incisor and cuspid teeth, because the form of the remaining part or parts of the cusps and prepared edges of enamel against which the gold is placed may be changed or disfigured, and the tooth be made less useful when corundum cones are used. The polishing of the gold upon the surface referred to may be done with pumice and silex, placed upon suitably-shaped points of wood, leather or rubber.

In every case the gold ought to be built out to the original contour of the part, and a little beyond the margin, then finished down to the surface of the enamel, so that the outline of the whole filling shall be the same as the line that bound, defined or terminated the lost tissue. This line ought to be fully restored, particularly the proximate surfaces of the bicuspid and molars, and the gold should be carefully trimmed down to, and finely finished with, the margin of enamel, which margin, in these cases more especially than in others, must be free to prevent recurrence of decay. If gold be not placed compactly against, and be not flush with, the edges of enamel the operation is not such as is demanded for the preservation of the remaining tissue. A plain surface of gold should not be made, because the tooth thus operated upon and the one adjoining may move closely together and disintegration of enamel then take place near the parts in contact. Case after case could be cited where disintegration had taken place near the buccal or palatal wall of the enamel that came in contact along the proximate surface against which gold (and other material as well) had been placed, while other parts around the same filling remained free from decay. Recurrence of decay did not take place in the same mouth, where there was such full restoration of the contour of missing tissue, and close knuckling-up of the teeth as to leave the margins of enamel free from contact and prevent the wedging of food between the proximate surfaces thus restored. For the instruction to restore so fully as now the contour of the teeth and "knuckle" them up closely to each other, as well as for instruction in other directions, I am indebted to Dr. Atkinson.

Restoration of contour prevents contact of the margin of enamel, and this prevention is necessary, especially when the tissues of the organ operated upon are not fully calcified. The contour of miss-



ing tissue ought always to be so restored with gold that the enamel of one organ may be free from contact with that of the next in the arch, and also that a part of the gold in one may be in close contact with the normal tissue of, or a filling (if one has been inserted) in the adjoining tooth, when disintegration is not likely to take place, because of the freedom from proximity, and the cleansing (by the saliva or fluids taken into the mouth, if by nothing else) of the margins of enamel against which the gold has been placed. All operations ought to be performed as artistically and made as nearly perfect as possible, so that if gold is exposed to view its appearance shall be beautiful and rather pleasing than otherwise. When operations have been so performed as to entirely prevent fluids or semi-solids from entering between gold and the tissue against which it is placed, and all discoloration has been removed from the surface of remaining tissue, the gold-tint may be seen through the light walls or edges of translucent enamel soon after the removal of the rubber dam and completion of the operation. If an opaque or dark line or spot be visible at or near the parts where gold ought to be in contact with the dentine or enamel, the operation has been imperfectly performed, and if not re-performed as it ought to be, chemical action may soon follow and the entire filling prove a failure. If operators were always very thorough in their work there would be no occasion to refer the cause of failures in dental operations to chemical action, or to the incompatibility of filling material with the dentine.

Disintegration commences just above or near the part of enamel in contact in the upper, and just below it in the lower, teeth, and soon takes place along the whole proximate surface and extends to the dentine, in which tissue decay makes rapid progress : but in those cases where the system is in good condition and the tissues are first-class, disintegration takes place slowly and is not so extensive, so that where decalcification of enamel is only superficial it can be removed, and, after a finely-finished surface is made, decay will not be likely to recur. In no case should a permanent space be made or left between the teeth, for even in such cases as those mentioned, food may so wedge against the gum as to bring about recession of this tissue and exposure of the necks of the teeth, and finally lead to the formation of a cavity of decay at the parts referred to. Permanent separations ought not to be made, for the reasons that they interfere with mastication, annoy the patient,

and, with few exceptions, do not prevent disintegration upon or about the surface that has been cut.

The teeth again come in contact almost invariably, excepting where antagonists prevent them; food wedging between them undergoes fermentation and disintegration takes place, and that, too, in a part of the tooth where it is difficult to perform a first-class operation. This may not take place, however, till long-continued pressure of food paralyzes the nerves in the papillæ throughout the gum-tissue pressed upon, and breaks the circuit or obstructs the movement of the molecules of living matter through that fine reticulated line between the gum (and all other tissue) and the brain, and the patient is, therefore, not notified of the presence of such obstruction to the neural and vascular circulation. This condition of the tissue as inevitably leads to its return to the embryonal state as does interference with nutrition in any other part of the system. In those cases where tonicity is at normal standard the gum is so close to the necks of the teeth as to prevent the lodgment of foreign matter beneath the margins. Not only this, but the tissue fills the space between the teeth almost entirely and protects the parts it covers. The gum should, therefore, be protected by full restoration of the contour of the enamel that is missing, and the gold ought to be finely-finished at all points that there may be no obstruction to the tissue again closing around the neck of the tooth operated upon. In this manner the margins of enamel at or near the neck of the tooth, against which the gold is placed and smoothly finished, is protected by the gum, and, if the whole operation has been properly performed, recurrence of decay at that part is prevented.

If disintegration does not extend to or beneath the margin of the gum, both the enamel and dentine of the proximate, as well as buccal surface of the teeth (especially those in which calcification of enamel is imperfect), ought to be cut away with fine burs to about the sixteenth of an inch above the part where the gum closes around the tooth, so that when the operation is completed this part may be protected from foreign matter. When the necks of the teeth are kept separate, as in nature, and the gum is in normal condition, it protects the portion of enamel, and well-inserted and finely-finished gold which may be beneath its margins, so perfectly that disintegration and even discoloration is prevented. In after years there may be lack of nutrition to the gum, or the circulation may not be full or free in the capillaries of the part, and the tissue may not close

around the necks of the teeth so tightly, but become less firm in texture, or commence to return to its embryonal condition. If there be such an acid condition as to disintegrate the enamel, decay may then take place above or about the cervical margin of the filling ; but if this be not the case, and the saliva be alkaline, a deposit of calcareous matter may take place beneath the margin of the gum, and, though there be no recurrence of decay, pericementitis may follow, and deposition of such matter prevent the rebuilding of the tissue, or keep initiated, or break the fine line of living matter in net-like arrangement between the epithelial and other bodies of the part.

When operations have been performed in the manner described, and the fillings are as finely finished as suggested, they are the best for the preservation of remaining tissue, protection of enamel over which the gold is placed, and for the prevention of the wedging of food against and the consequent recession of the gums. They subserve well the purpose of mastication, and present a beautiful appearance. In a word, the only way to keep permanently separate the margins of enamel of the proximate surfaces of the teeth and prevent recurrence of decay is by full restoration of the contour of the tissue that is lost.

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## MAGNETISM IN DENTISTRY.

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BY T. S. H.

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IN the July number of the MISCELLANY, "Alert" states that he would like to hear some opinions on mesmeric influence in dentistry. What I know of animal magnetism is from my own experience in every day practice, and I will endeavor to give some of it to the readers of the MISCELLANY. I exercised its influence for some years without knowing it, and might never have been conscious of the fact had I not been repeatedly asked by patients some such question as this—"Why is it that I can sit and let you work at my teeth and it does not hurt me, while others can do nothing for me?"

A few years ago a lady came to me for some gold fillings. She said she would need to be placed under the influence of ether to have the filling done. She had been under its influence, she said, on several occasions, as she was very nervous, and her teeth were exceedingly sensitive. I declined to comply with her wishes,

telling her I thought it unnecessary. All that was done during the first sitting was to prepare the cavities. The next day I filled the same with gold without any trouble, and, as she said, without hurting her. She said that my coming in contact with her had a quieting influence on her nerves, and, to use her own words, she believed I had bewitched her.

This is but one of the many cases I have had of a similar nature. I have many a time taken the hand of a lady in the ordinary way of hand-shaking, and without her volition she has caught my hand with both hers and then quick as thought excused herself. That is magnetism, and when two persons thus join hands the weaker receives the shock.

In all cases of nervous excitement I always talk as much as possible, telling my patients what I have seen, or, as Dr. Westcott used to say, "I give them a lecture on Dentistry;" anything to draw away their mind from the work. Some years ago at my boarding-house I came behind a lady who was standing in the front door looking into the street. She had her hands behind her, and the noise on the street prevented her from knowing that any one was approaching. I touched her on the hands, and quicker than a wink she had both arms around me, and before she could have known who it was. She begged pardon, saying she could not help it, and seemed very much ashamed of what she had done. She came to me a few days after to apologize for what she termed her rudeness, saying that my touching her was like electricity.

That this power can be used perniciously is beyond all question, but, as "Alert" says, "that is no reason why its powers should not be used for good." As the ancient sculptors carved the head of Janus, the deity of beginning, with two faces—one looking backward into the past, the other forward toward the future—so this power has two forces, the one already mentioned and its opposite, the repellent. I have had numerous patients for whom it has been almost impossible to do anything. They were continually getting away from me, as though they were afraid to come in contact with me. Good work cannot be done under such conditions. If I do anything in cases of this kind it is to make a temporary rubber filling and dismiss them, and I seldom see them again. Their friends have often told me, for them, that the reason they would not come to me again was because there was something inexplicable about it: that they could not have me work for them as there was no sym-



pathy between us. I know very soon when I have such a patient in the chair, and I also know that conciliation avails little.

That this power of mesmerism can be acquired I do not believe. Years ago I knew a traveling dentist, who is now dead, that had this power to an almost unlimited extent, and from stories I have heard of him from the rural districts in the northern part of New York State he used it for his base purpose. I saw one exhibition of his potency in subduing a refractory lady patient of another dentist. This dentist had heard of his power over restless persons and thought this a good opportunity to witness an exhibition of it ; so, with her consent, this magnetic dentist was introduced as one who would like to see a tooth filled. He stood on the left side of the chair and made it his business to catch her eye as often as possible, and in a very few minutes she was as quiet as a lamb. This shows that magnetism can be used for good in dentistry.

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### THE DENTIST AS A "PLUNDERER."\*

BY DR. J. T. CODMAN.

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NOT long since, after the fatigue of a day at the dental chair, I sat at the close of the evening meal by the table, and taking up my daily paper was absorbed in its contents, quite unprepared for the shock that was to come to my professional pride and integrity.

It was a well-bred newspaper, highly respectable, and one that is found in thousands of the best, as well as the most cultivated, families in the "Hub of the Universe," as our kindly poet and wit has named this city. It was, perhaps, the last of all places where I should look for an insult or a slur on any honest set of workers, either in an intellectual, social or professional sphere. But I confess to a feeling akin to that of having had a sudden box of the ear by some cowardly fellow when I read. It takes a good deal of chaff to rouse me. It takes a good deal to arouse any dentist who has trained himself, year after year, to bear all of the petty annoyances, the complaints, the fussy outbreaks, and the childish petulancies of thousands of patients—to bear them all placidly, calmly and quietly, to give, in metaphor, a kiss for a blow and with a soft answer turn away wrath. But when I read in the editorial column that "The dentists are a set of plunderers ; they beat the plumber

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\* Read before the Massachusetts Dental Society.

every time," I do not know whether astonishment or indignation was at first the greater feeling—astonishment that any man in such a position should thus insult a profession justly recognized as one of the most useful, and certainly one of the most trying and difficult, that has ever been adopted by any body or any set of men at any period of the existence of man on this earth.

I was certainly as indignant at the insult as I was astonished, and had the writer been present, all my previous training would have given way and the proverb would have been reversed. My "*wrath*" would have turned away a "soft answer." What ! had I associated myself with a set of plundering rascals and thieves ? For this had I labored and toiled ? For this had I given the best hours and years of my life ? For this had I grown gray in the service of my fellow-men, trying year after year to do better and better things for them all, and, as I had witnessed daily the necessary pain at my hands, grown kinder and more kind toward all who suffered ? For this have you and I and all of us joined into one fraternity of study and toil ? Or do we come to these meetings to band together to make a raid on society to see who can plunder most ? Have not our doors been opened wide ? Have not always the representatives of the press been present at our meetings, both at our social and our business convocations ? We can if we desire appeal to them. Have we not always in the fifteen years of the life of this Society made the good of the public the prominent work of our body ? Has it not been so in every Dental Society in New England, in all of the hundreds of meetings we have had ? I say yes, and call upon any man to deny it. The proof of this is abundant and at hand. Then why this wanton insult paraded in a public print ?

Perhaps, however, the editor had a personal grief ; perhaps some one had plundered him of a tooth, and, perhaps, for the sum of a dollar had given him all the best of science, and appliances and care. Maybe he regrets the time of which it is said that the dentist dragged men all around the room four times and only charged a quarter of a dollar for it. Less pay and more work is his motto, it may be. We can accommodate, no doubt. Let him send word and we will have a clinic next time, and have four or five dentists ready, and I will promise him that they shall all try, and none of them succeed until the last one is reached, and then not until he cries, "Enough!"

Perhaps our Editor feels grieved because his dentist's bill came in larger than he expected. Well, now, does not his grocer's bill

and his butcher's bill, and his shoe bill, and his clothing bill, and his gas bill, and his ice bill, and his apothecary's bill, and his physician's bill, come in larger than he expects? If not, he is not a family man. And does not the aggregate of bills foot up very much larger than he proposed they should at the commencement or the end of the year? If not, it is a wonder, and he must be a man of greater mathematical ability than most of us are not to find it so.

Plunderers, forsooth! because, perchance, some dentist received a larger fee than *he* thought wise. Because, perchance, some dentist may have made an unwise charge; to attack a profession for that. Does he want a foeman worthy of his steel?—steel pen, I mean. Then let him attack the medical profession, the veritable out and out specialists of medicine and surgery. There's a chance for him. Here is a list for him to begin on: For vaccine inoculation, \$5; for visit, \$3 to \$5; visit in consultation, \$5 to 10; visit after 9 P.M. and before 8 A.M., \$5 to \$10; mileage, \$1 to \$2 per mile; for a certificate of health, \$5; attendance in daytime in labor, \$20; for amputation of limbs, etc., \$100 to \$500; for opening abscesses, stitching recent wounds, cupping, etc., from \$5 to \$25. "No member shall omit charging any necessary visits made on the same day on account of their number." These are the lowest fees, all agreed to by the members of the Suffolk District Medical Society. But how often are they exceeded? "What do you think of this," said a lady to me, not long since: "\$5 for taking out an eye-winker from an eye, and \$5 for calling next day to see if the patient was all right!"

Is the opening of an abscess or the vaccination of a child more difficult than taking out a tooth? And yet I fancy our Editor dancing and howling like an Indian at a war dance at the dentist who would dare to honor him with such a fee. "Five dollars for taking out a tooth? Get me my ink-bottle; let me sling some ink! The vile plunderers!"

But, joking aside, though these fees seem large, and are large to those who are unable to pay them, and though they bear oppressively at times on those who are willing to deal justly, yet, viewing the field over, is the statement not true, "that few, and only but a few, professional men get rich?" Is not a physician's life, however honored, a life of toil and care? And is it not also true that it is more so in proportion to the energy, the sympathy and the devotion put into it? We know it is so with the life of a dentist that bears a

nearer analogy to a physician's calling than many are willing to admit. It is hard and perplexing. The harder one tries, the more difficult the work undertaken appears. It is easy to discard all uncomfortable and badly decayed teeth by extracting them, and saving the rest if we can; but to render more justice to the teeth of our patients than they ask for or can appreciate, at the expense of vital force, uncomprehended by those who have the work done for them, makes the dentist's life a hard one, just in proportion to the energy spent and the consequent physical exhaustion. To be wise, to be careful, to be prudent and painstaking, and to have a great measure of professional success (I say professional, not necessarily financial success), to honor your calling and have it honor you, and then to be paraded in the public prints as an Ishmaelite—as one of a band of robbers—getting in return the paltry fee that most dentists get, rouses-up a just indignation.

We are yet a young profession. Does any one take an exception to the word profession? Maybe that is what our editor does. He does not respect us as he does the doctor and the lawyer. Would he attack the lawyers because some of them get large fees? Would he call them hard names? No, because they were established and acknowledged as a profession long since. We are tooth-tinkers, mechanics, fit to be joined with any of the common herd of brick-layers and cobblers, or the gentlemen who cry "scissors to grind," or "old umbrellas to mend;" somebody for the gamins to mock at with impunity and cry "charcoal" at, or "there goes a plunderer."

It is highly probable that there are some who call themselves dentists who are not always honest. It is not strange. Some editors are less honest than others, but who is to call them all fools and rascals because of it? Has the editor been gouged or his friends been gouged? Then let them go where they will not be gouged. Nearly all of the two hundred dentists in this vicinity are native Americans. Will they so slander their own countrymen and townsmen as to say that they cannot find just treatment at the hands of a majority of them? But I am willing to admit that the editor might have thought he was to some extent expressing the sentiment of some portion of his readers, and it may be well to inquire if there is any such feeling in the community, and where it springs from, and what the result of it may be in the future.

The necessity of dentistry has been long felt. Prehistoric skulls



have decayed teeth in them. The Greeks and Romans of yore practiced dentistry to some extent. Roger Williams found the native Indians with decayed teeth—the brave warriors crying with toothache. Traces of artificial dentistry have been found for about a hundred years in this country. General Warren went into the Bunker Hill fight with some ivory teeth. Where he got them no one knows, but probably during some journey to England he had them made for him. They were one of the signs of recognition by which his body was known after the battle. But within fifty years so much improvement has been made in the art that a great host of practitioners have sprung up to answer to the great demand that has been awakened for the repair of natural teeth and the insertion of artificial ones. This it is that makes the pay of the dentist what it is. When this demand is fully answered, and more than answered, the average fee will be smaller and smaller in proportion as the profession is crowded ; but there will always be some men who, by superior skill or by superior knowledge of business, or by greater personal magnetism, will command the larger fees and the larger patronage. Are we to call them knaves because the public, of which editors are a part, go to them instead of others that they might go to if they wished, and perhaps be as well or better served for a less fee? Have we not all heard of our Webster and our Choate, of Curtis, Bartlett and other prominent lawyers? Have they not been models set up to gaze at and imitate? Has not the instruction been to the rising members of the profession, “Be as good lawyers as they are and get as good fees?” Does the rule apply for the lawyers and not apply for the dentists?

You may all remember that I spoke to you in an essay at our last annual meeting of the ill effects of excessive fees ; I deprecate them. I deprecate any plundering, any sounding of a man's purse to find how much he can be forced to pay, as much as any one. I go for an honorable fee from every one who is able ; not a dishonorable fee from any one. But let honorable men, who dare to criticise us, discriminate. Let them not charge upon my honorable associates dishonorable pilfering.

The amount of the dentist bills are generally over-estimated. I have taken pains to make estimates from fair rates of fees of the cost to a family for a number of years, where the teeth have been poorer than the average of those who go to the dentist's office, and the cost for good work has not been as much as, or more than, one

pair of shoes or boots per year to each member. Getting the teeth in order costs money, but keeping them in order with families of average health after takes down the average to a small sum. I trust other dentists will make estimates of cost to families for series of years.

It is not necessary for me to go deeper into the subject of the opinion entertained in some quarters, that dentists charge excessively. If all the work done at high fees had been worthy of the fees, without doubt there would have been less said of them; but many, too many, extravagant ideas have been paraded, too many forlorn hopes have been built up by men who were not mechanical in their ideas, and small return has been received by the patients, either in comfort or in endurance and success of the work, to warrant the time, pain and monetary outlay. But I cannot say that this is true of us as a profession, nor can any one else. If the error has been wider spread than I think, the public should take a liberal view of the matter and say, as I do, that the intense desire to save for them their natural teeth has led us into this mistake or error. But the extravagant way in which the fee of the dentist is talked of by persons who often in the same breath declare it a "horrid profession," and they "wouldn't be a dentist for the world," is an absurdity. Come down, my editorial friend, come down and out of your sanctum; cast aside the pen and scissors and take up the forcep and plugger and march on the royal road to *wealth*! Form a procession with the bloated bondholders and dentists; follow the long line of them down to the sub-treasury and assist them to cash their coupons. Ride with them in their chariots at 4 P. M. in a long procession over the Western avenue, and through the suburbs and around the Chestnut Hill Reservoir, and witness the admiring throng doff their *chapeaux*, and the belles of New England smile and show their fine teeth (some of which they bought at your establishment) and be happy. You can also have the printers' boy for a footman and office-boy, and he can knock around with a dental mallet and play the "devil" with teeth, as many other office-boys have done under their glorious instructors.

Ah, I see through it; you are too honest! There is altogether too much plunder for you. To be an honest editor is the noblest work of God. Ah, very well! It is my impression that one of the great duties of an editor is to give "credit," and if you choose to

remain an editor and an honest one, give the dentists of Boston and their assistants credit for at least some eighty thousand gratuitous operations at the Massachusetts General Hospital during the last twelve years—gratuitous in every respect, with the sole exception of a small return for cost of material. This is but a portion of the operations performed, for at the dispensaries and at the Boston Dental School and in private practice thousands and thousands more have been given to the poor and dependent. Quietly, unostentatiously, has the work been done, until a noble charity is now in our midst to found which would cost much money.

Poor miserable fellows we are. We beat the plumbers every time. In one thing we excel. Ah, another set of plunderers at four dollars a day. "So, Mr. Plumber, my wife died yesterday of the diphtheria and the three children are down, and we don't know what the matter is, but we think that there must be something the matter with the drains, as Dr. Homo Allopath says he has done his best and all his medicines work contrary. We do hope you will come up to our house and find out the trouble, or we shall have to sell our real estate at half its value and all be ruined." For four dollars a day Mr. Leadandsolder goes up and puts his nose into every hole and corner wherever there is a chance for a typhus or typhoid or a malignant disease to leak out: smells every place where a rat may have "bid farewell to every tear" and "shuffled off his mortal coil," etc., and finally discovers that there is a leak inside some dark place where he must creep in and lay on his back and solder a pipe laid by his ignorant predecessors. Does he take home typhus fever or diphtheria to his family? Oh, no matter, he is only a plumber, and he gets four dollars a day when he finds work!

Just one more little shy at that editor and I have done with him. I go for the maintenance of the honor of our profession. He calls us plunderers. I call him a filcher. It is not quite as bad a word, but I think it fits well, and I can prove it to you on wise and ancient authority. Shakespeare says:

"Who steals my purse steals trash, . . .  
But he who filches from me my good name,  
Robs me of that which not enriches him,  
And makes me poor indeed."

Would it be mean for a man to take my good name away? That were a private grief. What is to be thought of the man who would

publicly steal away the good name of a whole profession? Fortunately this cannot be done by any person however much it may be attempted. It is among our duties here to-day to establish and maintain the honor of our profession. As far as I am responsible, and as far as I am able, I shall do my part. I think we can say we have established, with but few exceptions, a high and honorable record, and as one of your number I propose to defend that record against any one or any number of persons who shall dare attack it. I propose also to teach those who would make light of our devotion or the results of our labor that it cannot be done with impunity; that we have power, influence and pens at command that will aid us in establishing the truth and the truth only. Then, if this society will unite in the maintenance of just laws, formed by the calm judgment of its most serious and thoughtful moods, and sustain a wise code of ethics that shall put itself in harmony with the most earnest and best men throughout our broad land, there will open before it a career of usefulness that shall broaden as years go on, and the great public—the large throbbing heart of humanity that is here and there and all about us—will side with us heartily and completely, and our slanderers will be thought no more of than the fly on the coach wheel, who cried out as he was rolling along on it, “What a great dust we kick up.”

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### A SINGULAR CASE.

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BY DR. A. M. ROSS, CHICOPEE, MASS.

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AMONG my medical acquaintances the case that I am going to re-cite is, in their experience, without parallel. Several here and in Springfield have examined the case, and, as it is beyond anything in its peculiarity that I have ever seen or read of, I submit it, with all essential details, for criticism by those interested in the subject of anæsthetics and their effects.

In November, 1879, a lady of about sixty-five years applied with her physician to me for the extraction of her remaining teeth, all of which were in such a state of decay, giving cause for much facial neuralgia, as to make any other course impracticable. The doctor, deeming it both safe and best to administer ether, did so, and I successfully removed all but one tooth. This—a cuspid—broke midway the length of the root. She recovered partial consciousness too



quickly for me to get the remainder out, and the removal of it was not attempted until September, 1880, when I extracted it—it giving her in the ten months interval between the operations occasional trouble.

Immediately after the first operation her tongue swelled so much as to make speech impossible and deglutition very difficult. This passed away after several days, but, at intervals during the ten months intervening between the first and second operation, the tongue would be quite sore and swollen. There seeming to be considerable irritation from the portion of root remaining, her physician and I deemed it best to remove it. In September last he administered ether, and I removed the root. Again the tongue swelled to a still greater size than before, and it was longer in subsiding to the natural size than the first time. Soon after the tongue recovered normal size, it presented a dark brown coating upon the dorsal surface, which gradually thickened in amount and darkened in color, though it kept within the territory it occupied when first noticed, radiating forward and back of the circumvallate papillæ about an inch, though not extending laterally to the edges of the tongue. After the lapse of several months this growth or accumulation became so thick as to interfere with taste. About a month since, on examination, the filamentous character of this coating was observed, some of the filaments being one-fourth of an inch long. The mass was so much of this length that the lady could part it along the raphe of the tongue, as one can the hair on the head.

Scraping of the tongue would remove quantities of the substance, and a dilute carbolic acid solution afterward applied to the surface would lighten the color and improve the taste, but after forty-eight hours the accumulation in color seemed the same as before treatment.

I immersed some of the filaments in glycerine, flattened them out and examined them under the microscope, using a half-inch objective. The mass was found to consist of epithelial cells in various stages of age and degeneration. These had assumed a shredded form from being matted together. Why these were not cast off in their proper order might be found in the fact that filaments of mycelium were also found which held the scales from being lost. A few vegetable spores were also found.

The lady has suffered from general nervous debility for several years, though having no specific trouble, excepting facial neuralgia, that ceased with the operation of extracting, till after the first operation, which, after the second operation, was intensified. The

constitutional trouble commenced with loss of appetite, inability to retain but very little food upon the stomach—at times none at all—and, complicated with all this, mental aberration.

The glossitis that followed each administration of ether *may* have been caused by the irritating effect of the ether locally, as it rapidly reduces the temperature of the mucous surface over which it passes. The tongue was not touched in either operation by instruments; respiration was not seriously interrupted. Therefore, the tongue was not handled at all.

It *may* be that hypertrophied epithilium resulted from glossitis.

I should like to hear this case discussed in the pages of this journal.

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### ANTI-SUCCESSFUL REIMPLANTATION.

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BY DR. G. O. SHAFER, CHAMPAIGN, ILL.

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IN nearly every dental journal we receive may be found something on the good results of reimplantation. It seems to me that the brethren either forget about their failures or do not like to have us hear of them.

I do not think that there are any in our profession who do not believe that teeth may be extracted, filled, replanted and grow fast. But the question is, Is the percentage large enough to warrant extracting a tooth for this purpose that you can possibly treat and save in the mouth? I am inclined to believe not. Now, *i. g.*: A few months since a gentleman of nervous temperament and about twenty-seven years of age called to have a superior central incisor treated and filled. On examination there was found a fistulous opening through the gum to the apex of the root, and on inquiry it transpired that there had been periodical discharges through the gum for several years. After unsuccessful treatment through the root, and my patient would not submit to an incision through from the outside, I decided to extract, fill and replace the tooth—*i. e.*, after he made the proposition. I first made known to him the probable success and the possibility of a failure. The gentleman did not want to lose the tooth, and having read of several successful cases of reimplantation wished me to perform the operation.

After having the tooth prepared for its alveolus socket, which took but twenty minutes, I syringed the cavity out with a weak solution of carbolic acid, placed the tooth in it and fastened with liga-

tures to the adjoining teeth. It then seemed almost as firm as any of his other teeth. I also cut off about two lines of the end of the root. My patient called every other day for three weeks ; but the tooth not causing him any pain or trouble, the ligatures were not cut until the three weeks were up, when the tooth spontaneously dropped out. I have replanted ten teeth ; four were failures, while six of them, as far as I know, are doing well.

This was only written for what it may be worth to those who have not planted teeth "just like young beets or turnips."

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### A CRITICISM.

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TO THE EDITOR OF THE DENTAL MISCELLANY :

*Dear Sir :* In the MISCELLANY for May I noticed an account of a case of antral disease treated through the lateral incisor by Dr. Davenport.

I desire to call attention to a few of the striking peculiarities of the case as recorded. To enter the antrum through the lateral in its normal position would require an instrument of less diameter than No. 20, Stubbs' guage. It must also, at the apex, deflect from a straight line nearly 90°. If of greater diameter, it would completely sever the thin wall between the canine fossa and the inferior meatus. The sinus would then be entered from one or the other of these positions, and if the angle differed greatly from a right angle the antrum would escape perforation. A drilling instrument of this peculiar construction ought to be accurately described in a paper of this kind.

From a somewhat careful study of the anatomy of the region, I am at a loss to understand why it necessarily follows that a tumor in the canine fossa, communicating with one in the "region of the upper jaw," should necessarily involve the antrum.

However, the most glaring inconsistency is that the "*palatine wall of the antrum*" should be absorbed in extent the size of a "walnut" and the molar and bicuspid teeth remain intact and in good condition. It is conceivable that an abscess at the apex of a lateral, by burrowing through the alveolar wall on either side, and a gradual accumulation of pus, by insinuating itself beneath the periosteum and distending the same, might present the tumors described ; but that an abscess in this position should take arms, march into the antrum, right about, divide its forces and march out again on diverg-

ing lines, one of which leads directly through the "*palatine wall of the antrum*," wherever that may be, requires a degree of sturdy credulity not possessed by the average Missouri practitioner.

The important local indication in such and kindred cases is free drainage, and this applies whether it be a simple abscess or a purulent engorgement of the sinus. The abscess cavity must fill by granulation; this process may be hastened, but cannot be supplied ready-made.

Let the tumors have had whatever remote and complicated connection fancy may be pleased to assign them, the root canal might have been safely filled, provided only the tumor in the canine fossa had been laid freely open and the cavity occasionally thoroughly irrigated with tepid carbolyzed water. Under such treatment the case would in all probability have gotten well in days instead of months.

Yours respectfully,

Trenton, Mo.

E. H. STECKMAN.

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TWENTY-FIRST ANNUAL SESSION OF THE AMERICAN  
DENTAL ASSOCIATION.

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HELD AT IRVING HALL, NEW YORK CITY, JULY 12TH, 13TH,  
14TH AND 15TH, 1881.

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(*First Day—continued from our last.*)

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CHANGING THE TIME OF MEETING.

Dr. L. D. SHEPARD, in proposing a resolution to the effect that the conduct of the officers of the Association in calling the meeting in advance of the usual time of holding it (August) met with the approval of the members, made a few remarks, in which he said it was proper that some occasion should be taken to mention this matter. He supposed that before the change was decided upon a good many members of the Association were consulted and approved of it, otherwise the change would not have been made. He did not wish to introduce anything that might give rise to discussion, and he, consequently, made his resolution as simple as he possibly could. He referred to the fact that, in the years 1874-75, he had introduced an amendment to the Constitution for the express reason that the Executive Committee might have the power to change the time of meeting. At the meeting in 1875 opposition was



made and he withdrew the amendment. He trusted the present meeting would pass the resolution he now proposed.

Dr. PARKER said he should vote for the resolution, and in doing so he wished to give expression to the opinion that prevailed to some extent at the time the change was made. It was made to accommodate some members of the profession who were going to Europe, and who wished to attend that meeting before taking their departure. It was stated that if the meeting were held at the time appointed last year these members of the Association who were going to Europe could not be present. He, however, was surprised that he did not see some of the members for whom the change was specially made present at that meeting.

Dr. McKELLOPS, St. Louis, said he spoke for the West, and he also was in favor of the resolution. The change, he thought, had the sanction and approval of all the members of the profession. It had, at least, the approval of the Dental profession in the West.

Dr. BARRETT, Buffalo, desired to support the resolution for one reason, if for no other. They were all there for the greatest benefit of the greatest number, and he did not desire that the members of the profession should be bound down by any ironclad resolutions. (Hear, hear.) He did not care whether it was in accordance with the Constitution or not, and he would make such a change in the face of the Constitution. If they condemned this matter now, they would not in future feel themselves at liberty to make such a change, and he wanted the Executive Committee to work for the best interests of the Dentists under all circumstances; but if any law, bye-law or article placed itself in the way of the best interests of the profession, he, for one, would ride over it rough-shod. (Applause.) He did not see why the whole profession was to suffer because a bye-law was to be sustained. (Applause.)

Dr. SHEPARD said a remark had been made on the matter in the last edition of a magazine published in Rochester, that the members who did this did it to get themselves re-elected. He went on to say that the members referred to were men who attended all the meetings of that Association year after year—in fact, were the Ring of the Association, and what would the Association be without these twenty or thirty men? They were not like the men who only attended the meetings of the Association when they were held three or four hundred miles from their residences. He considered

the change of meeting a wise move, and he honored the officers for taking the risk of it.

The President then put the resolution and it was unanimously agreed to amidst applause.

#### HOURS OF MEETING.

On the motion of Dr. SHEPARD it was agreed that, during the remainder of the Session, they meet three times daily, viz. : 9 A.M. to 12.30 P.M. ; 2 to 5 P.M. ; and again at 8 P.M., to adjournment.

It was also agreed that the afternoon meeting of that day, from 2 to 5 o'clock, be omitted, and that the evening be devoted to the Sections, so that they might have an opportunity to make up their reports.

Dr. BARRETT remarked that, in his opinion, every member of that Association should belong to all the sections.

The session then adjourned.

#### EVENING SESSION.

The meeting was called to order by the PRESIDENT at 8 o'clock. The minutes of the last meeting were read and approved.

#### DENTAL LITERATURE AND NOMENCLATURE—SECTION III.

Dr. ATKINSON, Chairman of this section, said they had a report prepared which was a continuation of former reports on the same subject, and he wished to ask Professor Andrews to read it, as it was in his (Professor Andrews') handwriting. Professor Andrews was not, he admitted, a member of that body, but he had been his co-worker these three years. He could read it himself, but not so well as Professor Andrews.

The report, as read by Professor Andrews, was an instalment of universal logical science, whose purpose was the introduction of a new system of technology that would apply to other arts and sciences as well as to the dental profession. It was based on the representation of substances by signs and sounds. The punctiform, liniform, planiform and solidiform substances were taken as a basis, and a set of sounds derived from the alphabet to make up root words, from whose combinations the various terms were formed. The reason given for inventing this new system was that the Greek and Latin languages had in vain been searched for new words to meet the requirements of advancing science.

The reading of this paper occupied considerable time, the members evidently being weary of the subject.

Dr. ATKINSON said that he had received word from Dr. Taft, who took the other side of the question, that he would not be present until to-morrow.

Dr. ABBOTT : I move that this matter lay over until we hear something a little different. Let it lie over until the other side of this question is heard from. I do not want any discussion upon this subject whatever. (Hear, hear.)

The PRESIDENT : It is proposed that the subject be postponed until Dr. Taft is heard from.

On the motion being put, twenty-three were in favor of the postponement and seven in favor of its being continued. The discussion on the subject was accordingly postponed.

#### OPERATIVE DENTISTRY—SECTION IV.

Dr. M. H. WEBB, Chairman of the section, said Dr. Friederichs was to read a paper on the subject of operative dentistry. He however was absent, and, in the meantime, they recommended for discussion the subject of root filling.

Dr. ATKINSON said if he were disposed to be crotchety he would propose that the matter be postponed, as was done in the case of the paper read by Professor Andrews. He hoped the body would do one thing at a time, and not get their minds mixed so as to spoil the difference between present knowledge and past knowledge.

The PRESIDENT : The question before the Association is the report presented by the Chairman of Section IV. Dr. Friederichs not being present, the first question for discussion is "Root Filling." Has Dr. Webb anything to say as Chairman of the Section?

Dr. WEBB : I have nothing to say upon it. I was not present at the meeting to-day, and I simply make the report.

Dr. ATKINSON said he went into dentistry from medicine on account of the abominable system of knowledge that prevailed in medicine. They remembered how arsenical paste destroyed nearly exposed pulps in human teeth, so much so as to call loudly for prevention against such a mode of treatment. It was then said the people would have the arsenic, but he (Dr. Atkinson) said that if the people would go in the way of destruction then it was time some one should stand out in the way of improvement. When he recommended the entire clearing out of the pulp when it was bad and going to the root of the tooth, and destroying the filament at the end of the root, he was called hard-hearted. He advocated the

saving of pulps at the time they were destroyed in a wholesale manner. Many persons were convinced that it made no difference with what the tooth was filled so long as it was hermetically sealed. His present idea was that oxyphosphate was the best material with which to fill. He had seen operations in gold showing an earnestness of purpose to get the instruments clear to the apex, and be sure that the canal was filled to that point. He was, however, sorry to say that the number of those who had the qualification to do that sort of work was very small. His usual method was to drill out to the apical opening, forming a shoulder at that point, then fill with oxyphosphate and cover with gold. If there was any probability of an abscess forming, his advice would be to raise the lip and with a pellet of cotton saturated with chloroform obtund the tissue, and then with a sharp lancet cut down to the cement at the apex, and they would have no further trouble. He was laughed at in Chicago, but it took a man to be a little crazy in those days to receive the truth. If they would mind him carefully he would be more to them than years of study through the colleges. He wished to God he could be the angel that held the curtain from the light. He warned them not to diagnose a case that would not bear diagnosing. Let them walk by the light that was in them and be less attentive to the shoulder-straps of the dentist books.

Dr. I. J. WETHERBEE said he agreed with the inference drawn from the remarks of Dr. Atkinson, that there was at the present day, as well as there had been in the past, a culpable negligence in the manner of treating pulpless teeth. If Dr. Atkinson was of that opinion he agreed with him perfectly, and he thought he was right in coming to that conclusion. If there was any treatise, any work, any question that took up the matter systematically, and pursued it through to the end in an intelligent manner—if there was a work of that kind, he had failed to reach it, or it had failed to reach him. There was a diversity of opinion as to the best method of filling pulp cavities. There were those who believed that gold was an excellent metal for filling pulp cavities; there were those who believed in gutta-percha, absorbed in chloroform, as it could be used without any material difficulty; and there were those who believed in oxychloride of zinc, because it could be forced up by a sort of piston process and carried up to the end of the root. Of the latter class Dr. Atkinson was among the number. He (Dr. Wetherbee) took issue with Dr. Atkinson in reference to the matter



of the filling of pulp cavities with oxychloride of zinc. Os-artificial and chlorides were forced up with a piston, and, when hardened, were supposed to make a permanent operation. He did not agree with the advocates of this plan, for, in the first place, they could not be sure the material had been forced to the foramer; and, in the second place, even if the operator did get it there, he could not be sure of its remaining intact, for he could not say how long it would remain in a hardened state. He heard echoing and re-echoing through the hills and down the valleys through all time, "Do you know it?" Suppose the tooth had been filled with it and it had decomposed to a greater or less extent——

A MEMBER—What had decomposed?

Dr. WETHERBEE—The oxychloride of zinc—that is, it had lost its hard condition. The person who introduced it supposes it to be hard, and he puts it in in a manner that would allow it to remain. Oxychloride of zinc is an absorbent and cannot remain hard, and it becomes decomposed in the course of time as it remains in the root. When it becomes decomposed there is room for gas, or the generation of gas, and then there is an end to the safety of that tooth. Wherever you can carry gutta-percha or oxychloride you can carry gold. I deny that oxychloride or gutta-percha are of more therapeutical value than gold. I had occasion to treat a tooth which had been filled by a gentleman who has a very positive failing to oxychloride of zinc filling. Three years from this time it had been supposed to be filled with oxychloride of zinc. At the absence of three years upon this pulp cavity you could carry an instrument to the extreme end of the tooth. If you were to tell this gentleman it had never hardened he would doubt your word. He believed it to be permanent. Oxychloride of zinc, as I said before, is an absorbent, and when that takes place the safety of the tooth is greatly endangered. This may not be true of gutta-percha absorbed in chloroform. I would, when there is time to perform the operation, in all cases prefer gold. But the objection is raised that gold is expensive, and therefore other substitutes are used and will be used. The highest and best wishes of the patient should in all cases be considered. If we were to become merely time-servers, let us close up our record-book, go out of our profession and engage in something else in which we can distinguish ourselves. I prefer gold for filling pulp cavities. It is said oxychloride of zinc, gutta-percha, etc., are better than gold, but I deny it.

DR. ATKINSON said what he had advocated was oxyphosphate. He denied that he had spoken of oxychloride in the manner indicated by Dr. Wetherbee. If he diagnosed a case, he wished in all cases to satisfy himself; he wanted to find out sufficient so that he might succeed in having a perfect filling. It was in vain for them to talk any amount of talk unless they knew what they were saying. Oxyphosphate would set even under water or saliva. If they did not carry a poison or ferment, they need not be afraid of going beyond the root. He had himself gone a quarter of an inch outside without causing any bad results. He considered oxyphosphate the best material for filling. He urged upon them the necessity of learning anatomy, but, as a rule, many of them were too indolent to learn.

DR. H. J. MCKELLOPS had paid attention to gutta-percha filling for roots ever since it came into use. He had for years given the whole matter special attention. He had, in the course of his practice, found roots where it was impossible to get the oxyphosphate to the end. To fill perfectly every canal he took a fine broach and worked into the canal a solution of gutta-percha in chloroform, and when he had enough in he took a piece of the gutta-percha, not softened, cut to a point, and, using it as a sort of piston, forced the material to the end of the root. The chloroform soon evaporated and a perfect filling was the result. The gutta-percha being insoluble there was no danger of disintegration. No matter how fine or tortuous the canal was, they could with care force the solution clear to the end of the root. The patient would show when the gutta-percha reached the end. If a man had only the patience and perseverance, and loved his profession, he could accomplish this result every time. Such an operation would not take one-sixteenth part of the time that gold would take, and he had seen as many operations as most men in the room, and he would promise that if it were given a fair trial there was not a man in the room who would use either oxyphosphate or gold, and he had tried every imaginable thing.

DR. W. C. BARRETT, of Buffalo, was of opinion that where no difficulties or complications presented themselves Dr. Atkinson's plan was an excellent one, but in cases where the root was crooked, mischief might be the result in attempting it, and this was especially apt to occur in the anterior root of the lower molars where the canals were often crooked. He had been practicing with gutta-

percha and chloroform for some time, and had filled teeth with it entirely. He found another thing in the use of gutta-percha which was very favorable to it, and that was that it was so easy to use. He was surprised it was not more generally adopted. The material could be forced to the extremest point of the root with a pellet of cotton on the end of a small broach. He could see many difficulties in the way of using oxychloride of zinc.

Dr. T. W. BROPHY, Chicago, mentioned the nerve reamers invented by Dr. Talbot as supplying the means required to enlarge the canals. The points, he said, did not cut, and by their use crooked canals could be made straight without danger of making a new opening at the end of the root.

Dr. G. F. WATERS, Boston, said he thought it a good plan to pile on the difficulties, and he would not go upon the platform in order to tell them how to do an easy thing. The methods spoken of would suit the ordinary cases found in adult teeth, but what were they to do in the cases of girls and boys in whom the tooth had not time to form a foramen, but was an open funnel, and where a portion of the tooth was broken off by a fall and the remainder was driven upward, crowding upon the vessels and the pulp? He had a case of a boy in which both upper centrals were broken, one across the lower edge of the pulp cavity, exposing pectinated portions of the pulp. The other was broken across diagonally, exposing the pulp for some distance, and causing the horns to bleed. The former was covered with oxyphosphate, which was allowed to remain several days, causing no pain, but the pulp eventually died. In the tooth, where the horns of the pulp bled, the exposed parts were dressed with carbolic acid and oxyphosphate applied, but there was much difficulty in keeping it in place. By perseverance it was so placed as to be retained for twenty-four hours. Now there was no exposure of this pulp.

It was here moved that the discussion remain over until next morning at nine o'clock. Agreed to.

*(To be continued.)*

#### NEBRASKA STATE DENTAL SOCIETY.

THE fifth Annual Meeting of the Nebraska State Dental Society will convene at Omaha, Monday, September 12th, 1881, at 7.30 P. M., and continue in session three days.

Freemont, Neb.

W. F. ROSEMAN, *Recording Sec'y.*

## WISCONSIN STATE DENTAL SOCIETY.

THE Annual Meetings of the above Society were held at Milwaukee, on July 20th and 21st. Dr. GEO. W. KEELY read a lecture on "Correction of Irregularities," which he illustrated by means of diagrams and paintings.

The special committee appointed to draft resolutions concerning the Wisconsin Dental College reported as follows:

*Whereas*, Circulars and advertisements have been widely circulated by parties from Delavan, Wis., claiming to be "The Faculty" of the Wisconsin Dental College, and regularly chartered under the provisions of Chapter 86, Revised Statutes of 1878, offering "to confer" a diploma and degree of "D.D.S." without any apparent intention on the part of said "faculty" of properly educating persons, or without ever having so done, in accordance with the demands of all reputable Colleges in all professions, thereby cheapening and lowering the dignity and standing of the dental profession, in the estimation of the public, as well as endangering its safety in the licensing of incompetent persons to practice dentistry, and to place such on a par with men of known skill and experience; therefore,

*Resolved*, That the Wisconsin State Dental Society hereby denounces all organizations or institutions purporting to be Dental Colleges, whether chartered or not, which do not require and are not prepared to give a thorough and complete course of study in all branches of our specialty, as would be required in order to receive recognition by the American Dental Association.

*Resolved*, That we refuse to recognize, or place any value upon, any diploma or degree issued or furnished by the so-called Wisconsin Dental College; that we hold in contempt the authors and managers of this concern, who have, by their action, brought odium upon the profession of this State; and, that in the future, as during this session of this Society, no person connected with it will be recognized as entitled to a seat in our meetings.

*Resolved*, That copies of these resolutions be furnished the daily press of this city, and our professional journals, for publication.

*Committee*, { H. W. CHILSON, EDGAR PALMER,  
G. H. MCCAUSEY, CHAS. C. CHITTENDEN,  
ARTHUR HOLBROOK.

The resolutions were unanimously adopted.

The following officers were elected for the ensuing year: Presi-



dent, Dr. George H. McCausey, Janesville; First Vice-President, S. L. Judd, Beloit; Second Vice-President, L. C. Stewart, Waupun; Secretary, R. G. Richter, Milwaukee; Treasurer, R. W. Hurd, Madison.

Dr. DUGLASS offered a resolution that a committee consisting of Drs. Chittenden, Palmer and McCausey be appointed to present the facts in relation to the Dental College at Delavan, and in behalf of the State Dental Society, ask the Legislature at its next session to annul the charter of the College. The resolution was passed by a unanimous vote.

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## ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

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### ORDINARY MONTHLY MEETING, JUNE 13TH, 1881.

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THOMAS A. ROGERS, Esq., President, in the Chair.

Mr. S. J. HUTCHINSON announced that Mr. Lloyd, of Agra, had presented to the Museum some specimens of the teeth of an Indian fish, called the "Rahoo," and also the canine of a tiger which had been sawn off, and worn as an amulet by a native. Mr. Edwin Canton had sent a very fine specimen of the teeth of the fossil *Iguanodon*.

Mr. CHARLES TOMES said that this tooth was a remarkably good specimen; it showed well the serrated enamel ridges. It was accompanied by another specimen which had been well worn, and which showed how the presence of the enamel on one side only of the tooth, and forming the cutting edge, kept the tooth sharp for a long time, until it was almost worn away.

A portion of mammoth tusk had also been sent by Mr. Box; it was much weather-worn and of little value as ivory. It was a popular belief that mammoth ivory was an important article of commerce; but this was not true. Tusks were occasionally found in good preservation—thus one was offered to the Oxford Museum a few years ago, which was worth £60 as ivory alone—but more often they were much broken up and discolored by exposure to the weather, the action of floods, etc. In 1873 and 1874 some large importations of mammoth ivory were brought to this country, but only part of this large quantity was sold, and those who bought it did not find it good. Every now and then some of the remainder was brought forward for sale by auction, and bought in, giving rise to the idea that there was a regular supply of the material.

Mr. HILDITCH HARDING showed an upper central incisor which had been extracted from the mouth of a boy who had applied at St. Thomas' Hospital suffering from abscess about the fang of this tooth; half the crown had been broken off some time previously. On extracting the tooth a fragment of wood was found projecting about a quarter of an inch beyond the apical foramen; this had, of course, been the cause of the abscess. On being questioned, he said that he had been in the habit of chewing wood for amusement in school hours, but he had no idea when, or how, the splinter got into the tooth. A somewhat similar case had been narrated by Mr. Ranger, ten years ago. In his case the impacted articles were a piece of slate pencil and a pin.

Mr. HARDING also exhibited part of an elephant's tooth, to which the following history was attached: An Indian officer, finding that one of his elephants was suffering great pain from toothache, thought that he might relieve the animal by sawing off the crown of the tooth. This was accordingly done, but the portion removed showed no signs of caries, and the elephant was not relieved by the operation. The tooth was brought to England, and had been used as a paper-weight.

The same gentleman also handed round a model of the upper jaw of a sailor, aged twenty-four, who applied at St. Thomas', on account of a large perforation of the palate. He stated that when he was twelve years old the bones of the nose came away, together with a considerable portion of the hard palate; after this a sound and healthy canine tooth made its appearance at the margin of the aperture. There was an offensive discharge, and his speech was almost unintelligible. There was no history of syphilis. He was, however, placed under treatment by iodide of potassium and mercury, and a model of his mouth was taken for the purpose of making him an artificial palate; but as he was called away to his ship, which was bound for the Cape, further treatment had to be postponed until his return.

*(To be continued.)*

## THE DENTAL ASSOCIATION OF THE UNITED STATES OF AMERICA.

THE second annual session of the above society was held in New York on August 8th and 9th. Owing to a press of other matter we are obliged to hold our report over till next month.

## EDITORIAL NOTES.

## SHALL A DIVORCE BE OBTAINED?

Is it desirable that operative and mechanical dentistry should be divorced? This is a question which is brought before the dental public in the pages of a contemporary. It is worthy of note in this connection, that some of our leading dentists advocate a subdivision of the dentist work, maintaining that the ramifications of operative and mechanical dentistry are too extensive for a man to be able successfully to master them all. But the men who take this view of the case occupy a very different ground from that taken by Dr. A. T. Metcalf, in the *Ohio State Journal of Dental Science*. While they maintain that in each of the two branches of the profession there is an abundance to engage the time, energy and talent of the practitioner, Dr. Metcalf sees no wisdom "in wasting those excellent and rare qualities in manufacturing mechanical appliances which can be fully as well constructed by persons of less attainments." The doctor maintains that the restoration of "lost facial or oral expression" is amply provided for by the designer of the artificial teeth which are to be found in the dental depots. He states further, that "it is not fair to judge of the professional merits of an oculist by the excellence of a glass eye that he has inserted, or of an aurist for the symmetry of a tin ear that he has adjusted, or of the surgeon for the comfortable truss he has fitted and the cork leg he has applied, or of the dentist for the artificial teeth he has selected and adapted." All this is partly true, and partly true only. You do not judge of a dentist's anatomical knowledge or ability to fill a tooth by the way he selects and adapts artificial teeth, but you do judge his "professional merits" as an artist, and as a man capable of restoring lost facial or oral expression, by his selection and adaptation. The suggestion that Dr. Metcalf makes, that Dental Colleges should abolish instruction in mechanical dentistry, is one of the most extraordinary suggestions we ever remember hearing.

In the same issue of the journal in which Dr. Metcalf airs his views we find the following from the pen of Dr. Watt: "Nothing else pertaining to dentistry requires so high a degree of talent, genius, cultivation and skill as the selection of artificial teeth and the adaptation and adjustment of the same." To most folks, we venture to say, this view will commend itself as the nearest to the truth.

Dr. Metcalf seems to desire that the mechanical part of dentistry should be cast over to whoever chose to take it up—barbers, blacksmiths, carpenters—anybody. And for why? Because, forsooth, “then the practice of operative dentistry will be *professional*, and the medical profession will extend a cordial welcome as one of the specialties of that profession.” For Heaven’s sake let not dentists exhibit such a hankering after recognition by the medical fraternity as this. What?—a departure from its duty by the profession—a turning over of one-half of its work, and that by no means the least important half, to quacks, in order that it may be recognized as a profession and lose the stigma of practicing a trade? If such a thing were done who, pray, would do the surgical work of the dentist? Really the suggestion of Dr. Metcalf must be a huge, though sorry, joke.

#### ANOTHER HINT TO OUR SOCIETIES.

WE are pleased to find that the editorial note which appeared in the July MISCELLANY, under the caption “A Hint to our Dental Societies,” has been the cause of some discussion. A dentist friend of ours took the cue given therein, and when attending his State Society meeting urged on the brethren the desirability of handing their papers to some influential magazine for publication. A discussion on the subject was raised, but no good result was attained, except that the idea was planted in the minds of several members that the Society was not doing the very best thing in keeping to itself its essays for a year and then publishing them in book form.

We maintain that a thoughtful dentist, who has something to say and is capable of saying it in an acceptable manner, is discouraged by the plans adopted by our Societies. He may spend weeks over his essay, and then, after reading it to a small audience in, perhaps, a musty room, with the temperature at 90 degrees in the shade, his paper is collared by the Secretary and stowed away for a year before it is published. Then when it does see the light, the members regard the volume in which it appears as antiquated—much as they would regard a copy of a daily newspaper that was a month old.

The advocates of the present method say that it is because they take a pride in their State that they desire to keep to themselves their papers. The unfortunate thing about it is, that the Society, which is a collection of individuals, wants to act, and does act, in a way that is contrary to the wishes of the individual members who



are writers. If a man spends a long while in the preparation of his article the wider the circulation he has the better he likes it. The thought that his views are being read in every country on the earth incites a feeling of laudable self-congratulation. The knowledge that his child—the offspring of his brain—is languishing in the pigeon-holes belonging to the august “Publication Committee” brings with it a feeling of remorse that he spent so much pains on his essay. Surely, if pride of one's Society is uppermost, the most effective way to gratify it would be to have the papers of its members talked of all over the world. This can only be done by, in the first place, encouraging the writers to do their best, knowing that their essays will be published in a widely circulating journal; and, secondly, by sending them to the journal for the editor's judgment.

#### ETHICS OF DENTAL JOURNALISM.

Our esteemed friend and co-laborer, Dr. W. H. Robinson, of Suisun, Cal., is very much concerned about the ethics of dental journalism. We assure him, with all the kindness of feeling we can command, that he need not bother himself. The journalism of this country is not of a very exalted nature—not nearly so ethical as we should like to see it; but somehow it strikes us that that pertaining to dentistry is keeping pace with that which pertains to the other professions, always taking into account the time the one and the other has been established. We of this journal see our faults as well as those of our contemporaries. Some of our own shortcomings we have been trying to remedy ever since we discovered them. Others there are which shall be tackled in due course and removed if possible. But Rome was not built in a day. The fact that we do not print a list each month of the unethical things dental journals do is no proof that we are blind to them. Byron once said: “A thousand years scarce serve to form a State; an hour may lay it in the dust.” Using a big thing for the purpose of illustrating a small one, we may say the same concerning any journal. A false move may be made in the direction of a stricter observance of what is obviously ethical. If England were to abolish her army and navy she would make a move in the direction of national ethics. But how much such an act would do to lay her in the dust! And so a dental journal may make an ethical move in too great a hurry at a great sacrifice. We do not at all object to Dr. Robinson telling us his views, and we hope he will not object to our replying to them.

## RELIEFS TO DULLNESS.

What a dull, insipid life it would be on this earth if the lives were all of one mind—if there were no differences of opinion. Many a hearty laugh do we have over expressions of thought made at some of our Dental Society meetings. It is akin to humorous to find one man saying that mechanical dentistry is, after all, but carpentry and requires no artistic skill, for that is all supplied by the artificial tooth maker, etc.; while another says, "there is more art in prosthetic dentistry than in operative;" and a third "thinks prosthetic dentistry has advanced more than operative. Filling teeth is simply mechanical work, while prosthetic dentistry embraces the highest kind of art." Such views as these were expressed at a recent meeting of the Indiana State Dental Association. There are a great many laughable things said at our Society meetings unconsciously—some humorous, some especially grandiloquent, some epigrammatic and pungent, and some original remarks are made which are well worth preserving. A gentleman of leisure might collect the fugitives into a readable volume.

## MAGNETISM IN DENTISTRY.

On page 328 we give our readers an article under the above heading from a well-known dentist. He gives some instances in which he and others have used their power of exciting animal magnetism for the purpose of quieting their patients. The subject is one of great interest to the profession, and hitherto it has not been discussed at meetings of dental societies or in the dental journals to the extent that it deserves. We shall be glad to hear from other dentists on the subject, with illustrations of the success or non-success that mesmerism or animal magnetism has been used by them in their practice.

## A PURGATION PROCESS.

There is a vast amount of cumbrous machinery in the Dental Act of England, and, as a consequence, those interested in it are grumbling continually about it. There is within the wheel of English dentists a smaller wheel, whose object it is to secure "the expurgation of the Dentists' Register," as it is called. There are in England a number of men who are legal though not competent dentists. Several hundreds of inexperienced and uneducated per-

sons have got within the pale, and it would seem that no power on earth can turn them out. They declared some time ago that they had practiced, or were practicing, dentistry, and so their names were enrolled on the Dentists' Register when it was made up, and now they stand there. The more easy-going of English dentists say "Let them remain. They will die one day, and no more of their stamp will be admitted." The less easy-going say "Turn them out. See the amount of harm they will work to the people and to the profession through their ignorance while they live." Some sinews of war are being raised in the shape of money by the bellicose party, and before long there will in all probability be a struggle to turn out these pseudo-dentists. This struggle and the preparations for it form one of the most interesting features just now of dental politics in England.

#### DENTISTRY IN PERSIA. ■

It strikes us very forcibly that Persia would be a good place for some of our surplus dentists to emigrate to. The land is historic; the archæologist would find himself surrounded by objects of perpetual interest; there are slight evidences that he would be revered and treated handsomely. The following paragraph has just fallen in our way, which is suggestive of many things: "Great has been the circumstance that surrounded the recent extraction of a troublesome tooth that belonged to the Shah of Persia. His entire Court was present to witness the awful spectacle, and during the same day he received no fewer than three thousand ducats as presents of congratulation. It was a European dentist who performed the successful operation, and his grateful Majesty rewarded his skill with an even one hundred of the ducats." It would seem that one way for the Shah to raise money is for him to have a tooth pulled. By this operation he netted no less than two thousand nine hundred ducats. Three thousand we are told were given to him as congratulatory presents, and one hundred of them he paid the operator. We admit freely that the worthy Shah did not treat the dentist as handsomely as he ought under the circumstances; but, then, a man is not likely to be as generous when his tooth is out as just after dinner. However, dentists are good teachers, especially American dentists, and the people, including the Shah himself, could be educated up to a pitch of greater generosity in time.

## PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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THE *Ohio State Journal of Dental Science* comes to us full as ever of matter of an exceedingly interesting character. Dr. L. C. Ingersoll contributes a paper on "Sanguinary Calculus"—or that structureless calcareous deposit sometimes found at the apex of the root of a tooth—sometimes extending in a line of granules along the root from the apex to the neck of the tooth, and sometimes in a line encircling the root just under the free margin of the gum. The doctor maintains that sanguinary calculus is one of the results of inflammatory action and not a cause, while salivary calculus is a cause of inflammation and not a result. "Galen" has a second paper on "Cholera Infantum." Dr. A. T. Metcalf pleads for a divorce between operative and mechanical dentistry. The latter, he maintains, is a trade, and one not requiring any special skill. He would have instruction in it abolished at our Dental Colleges, and have it go generally to the dogs. Ninety-nine per cent. of the profession disagree with Dr. Metcalf. Dr. A. G. Rose gives an account of a case where a portion of the inferior dental nerve was removed. Dr. W. H. Robinson blows a little blast at dental journals—a sort of supplement or addendum to the article published in the MISCELLANY some months ago from his racy pen. Dr. F. W. Sage writes on "Unheroic Treatment of Alveola Abscess." And then follows correspondence and editor's specials. These are as bright and cheerful as ever, and one cannot but congratulate Dr. Watt, who, as he says in this issue of his magazine, "was never free from pain, unless when too young to remember," on the interest he infuses into these "specials." Some miscellaneous items complete the number.

The *British Journal of Dental Science* has evidently come under new editorial management, and the fresh blood is making itself felt. As the leading dental journal of the Old World it has held its ground well, and we hope it is now taking a new lease of life. Its editorials are more numerous than usual in the number before us, the first treating of "Ourselves." The editor refers to the fact that the journal has recently passed under new management, and while promising adherence to the lines of the policy of the past, the writer promises that no stone shall be left unturned to attain a still



higher degree of excellence. A new feature, under the head of "The Dental Examiner," has been introduced, in which new materials and appliances for use by the dentist will be criticised, favorably or otherwise, as they may be offered to the profession. Correspondence and other items are also contained in this number.

The *Cosmos* opens with an article on "Maxillary Abscess with Complications," by Dr. D. H. Goodwillie. Several interesting cases in the practice of the writer of the article are adduced as illustrations. Dr. J. Foster Flagg gives a "Plain Record of the New Departure." To put briefly his record it is this: New Departurists do not say that gold is the worst material that can be used in the filling of teeth. It is the abuse of gold which is antagonized by them. They admit that gold has "incomparable capabilities," and that gold fillings sometimes last a lifetime. "The New Departure begins where gold leaves off. It is not the aim of its advocates to decry a metal, but to antagonize its idolatrous worship and to restrain its abuse." Let us hope that this clearing away of the fog will do some good.

*The Journal of the British Dental Association* has an essay of an unusually eloquent character, by Mr. Edwin Saunders, on "Specialism," which was delivered at the annual meeting of the Metropolitan Counties Branch of the British Medical Association. An address, too, by Professor Owen, made at the public distribution of prizes to the students of the Dental Hospital School, is especially valuable in its way. The direction of the dental studies of the professor has been in a great measure to the diagnosis of extinct animals, and anything he might say would be weighty and valuable. He paid a high compliment to his own dentist in the course of his address when he said, that (although he has some artificial teeth in his own mouth) he never possessed a dental system at any age which so agreeably and so painlessly performed its functions in every relation, whether as to outward appearance, or as an aid to speech, or as a preparatory digestive organ, as does that which he now possesses. We wonder if Professor Owen's dentist is an American?

There is on the face of it a kind of paradox in the title, "Eclectic and Conservative Dentistry," given to a paper in the *Missouri Dental Journal*, by Dr. A. V. Eaton. Talk to a conservative dentist or a conservative physician about eclecticism and he will turn his nose skywards. There is a tendency in these days to rescue this word

eclectic from degenerating. It has been going to the bad. It has been, and is now, by some people applied to men who run about from one position to another accepting as postulates what are merely one-sided, rattle-brained opinions, ever ready to suck up, as does a sponge, whatever falls in their way, if it has any plausibility. The good word "gossip," which originally and literally signified peace or relationship with God, has gone fearfully to the bad. We are pleased to see that "eclectic" is being arrested. The eclectics of olden times were philosophers who professed to choose from all systems that which they thought true—an eminently rational thing to do, but a man needs a very cool head and judgment far above the average to do it with any success. It is gratifying to find that Dr. Eaton has weighed the words "eclectic" and "conservative," and, so to speak, torn them from the situations in which they have been placed so long, and set them up on the ground for his readers to gaze on and appraise. He says, "Eclectic—I select; Conservative—I preserve that which I select." That is clear. That dispenses the paradox to the four winds, and shows us how wise it is to be an eclectic, conservative dentist.

The *Odontographic Journal* gives the Wisconsin Dental College men an exposure. It has some well-selected articles of value to the profession.

The *Dental Luminary* published an article read by Dr. R. W. Thornton before the meeting of the Georgia State Dental Society as a Presidential address. The Doctor touches the question of the proposed recognition of the dental by the medical profession, and opposes it. He makes a good remark when he says that "Dentists are better informed on medical subjects than are physicians on dental subjects." He expresses the opinion that, if dentistry is recognized as a specialty of medicine, "ten years hence would find it vastly impaired and retrogression would be stamped on every lineage, while with our system every decade will mark a new era for the better, and the next fifty years will find it equal in usefulness and honor to any calling in the land." Dr. W. W. Ford, of Macon, has an article on chemistry and therapeutics. Dr. John H. Coyle gives the "New Departure" theory a dressing down and quotes as a basis the assertion once made by somebody, that "in proportion as teeth need saving, gold is the worst material to use." Who invented this phrase? Certainly it was not a representative "New Departure" man.

## CUTTING A THIRD SET OF TEETH.

TEETH are organs that, as a rule, have a term of existence more limited than that of the organism of which they form a part. In many of the lower vertebrates they are shed very soon after they are completed and in use, and are as quickly replaced by others. In the mammalia, however, there is but one succession of teeth naturally shed, but though the successors of the so-called "milk teeth" last long enough to acquire the title of "permanent," they are rarely retained to a very advanced age. There is, however, a belief entertained by many, of the occasional acquisition of a third set in human centenarians. Thus it is recorded of the Countess of Desmond, in *Fynes Morison's Itinerary* (1617), that not many years before her death, which is said to have occurred at the age of 140 years, "she had all her teeth renewed." I was led into a discussion on this point by a worthy clergyman at the house of a friend whom I was visiting, and, to my scepticism as to the alleged age and third set of teeth of the old countess, he replied that there then lived in his parish an old woman alleged to have passed her hundredth year who was actually then cutting her third set of teeth. I rejoiced at this instance. I had long been convinced that actual phenomena had suggested the statement, but that the nature of these had been misinterpreted, and I deemed myself most fortunate in having an opportunity of testing the matter. The following morning I was driven to the old woman's cabin. It was in the north of Ireland, and she was sitting crouching over her peat fire, a typical example of human decay. To the shouts of her pastor the deaf old crone replied by pulling down her skinny lip and exposing the side of her lower jaw, from which there projected through the gum the blackened stump of a tooth, the crown of which had gone many years before. The absorption of the gums consequent on the edentulous state of the jaw in senility had brought to light this remnant of a long-lost tooth. Other stumps of teeth, of which the loss of the decayed crown had been forgotten, might, in like manner, appear through the shrinkage and absorption of the senile jaw. And this I take to be the true ground of the allegations as to the acquisition in extreme old age of a third set of veritable teeth. —*Professor Owen, in the July number of the "Journal of the British Dental Association."*

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*October*, 1881.—No. 94.

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## CONTOUR RESTORATION OF THE SUPERIOR CENTRAL INCISORS.\*

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BY E. PARMLY BROWN, D.D.S., FLUSHING, N. Y.

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THIS paper, which is accompanied by illustrated drawings, plaster models, gold fillings in the mouth and on natural teeth that have been extracted, more fully to explain the remarks made, will treat of one of the most common disasters that occur to the human teeth, and one that is least successfully treated of any form of caries—one which is not generally performed in an artistic, scientific and durable manner.

Statistics taken by two dentists, extending over about ten years in their daily practice, in remote locations from each other, accounts of which appeared in a dental journal some years ago, harmonized in one particular, that the upper central incisors were more liable to decay than any other teeth. My own observations lead me to believe the correctness of the statement. The first caries appeared there in my own mouth. The first fillings there were inserted by hand-pressure and non-cohesive gold by one of the leading dentists in New York City. In two or three years they failed, only to be repeated in the same way, with the same failure soon following, thus causing the loss of one pulp and the corner of the tooth. The

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\* Read before the Connecticut Valley Dental Society, June 17th, 1881.



corner was restored by the wooden mallet and sponge gold. It was broken off in one year, and replaced and broken off again in one year. The work was done by another New York dentist, the best I knew of. Another expert operator was chosen, a graduate of Philadelphia College. The corner was replaced with cohesive foil and six thousand seven hundred blows of the lead mallet. It stood seven years, then the tooth and gold shaft entering the nerve channel snapped off while eating, leaving only a pulpless root behind.

Two original fillings of hand-pressure and non-cohesive gold failed, probably for want of thoroughness and lack of the means of those days to save but a small percentage of teeth worked at. The failure of the two corners restored by sponge or crystal gold was due to poor material for such work, to improper mode of operating, and to defective adaptability of gold to the dentos. The last corner restored by foil and lead mallet failed in seven years on account of improper mechanical union of the gold to the enamel at the cutting edge, which, by the crumbling of the enamel at the point of contact with the gold, and the gradual forcing away of the gold by the rotary action of the jaws during mastication, permitted the decaying influence to make progress.

Before proceeding with a minute description of this class of work in its successful aspect, it will be well to relate a few more of the present day failures of it, and its present day extent of practice in the city of New York.

A short time ago one of my students met a young dentist connected with one of the oldest and best known first-class dental offices in the city of New York. This dentist, in the centre of New York City, near White's dental depot, where the best dental clinics in the world have been held for fifteen years, said that he did not believe in this building up work ; that none of it was done at their office, and that it was not durable.

He may have seen many failures. There are many—they come from three causes. *First*, Not knowing how to do them. *Second*, Not doing them thoroughly when knowing how. *Third*, Not using good gold and proper appliances when capable of performing them.

Some men may be able to build up a golden incisor with hand-pressure, but how many can do it and do it successfully and profitably? Not one, I venture to say, and challenge contradiction. The secret of the greatest success in this line of operating is a

great number of light and rapid blows in harmony with tooth structure and the living organism to be operated on.

After counting the six thousand seven hundred blows used on my tooth twelve years ago, I asked Dr. Atkinson (then a leading advocate of the mallet, while in his own office one of his assistants was using the heavy lead mallet) how many times he had struck the plugger during some of his largest operations. He replied probably two thousand or two thousand five hundred times. I told him how many I had counted, and he said that six thousand seven hundred blows could not be struck in one entire day. We timed and counted the malleting then in progress by his student, finding that nearly one hundred thousand blows could be struck on a gold filling in a single day by a hand-mallet.

I deduced from the experience of the heavy lead mallets' six thousand seven hundred blows that I would prefer to take more of them, and take them lighter and livelier. I preferred to take, say, three times as many one-third as heavy, and have them laid on three times as fast, and how to accomplish this has been my earnest study. Since then we have counted fifty thousand blows on a single filling by the hand-steel mallet, occupying five hours time. I lately had occasion to replace a large corner on a central incisor, pulp alive, for a New York City dentist, which had failed five times. The last time the operation was done by a college graduate, taking five hours to perform, and was broken off entire at the supper table at the first meal eaten after being put on.

Two years ago a dentist from New Jersey had two gold corners put on his central incisors at the New York City clinic by the heavy lead mallet. One year after he showed me, at the same place, a pivot tooth where one tooth was, and a score of nicks on the enamel margins of the other corner, where the great force of the blows had bruised the tooth.

A dentist at one of the meetings at Philadelphia, in 1876, said that "anybody could build out or up a tooth." So he can, but there are different ways of doing it. One way is to build it up and break it off while finishing; another, to have it broken off when the first meal is eaten; another, to let it stand a month or a year; and a better way, is to do it well enough to preserve the tooth five or ten years. But the best way, and the way we must perform our work if we would acquire fame and fortune and keep at peace with our consciences, is to use that skill and care and those means which will

make nine out of ten of our gold fillings lifelong monuments of usefulness and skill, and an appreciative public will overlook the ten per cent. of failure as a fair ratio of imperfection, associated with the best of all things human.

Contour restoration has for more than fifteen years been particularly attractive to me, which has led to my making it somewhat a specialty, and I have built up on incisor teeth in the last twelve years upwards of three thousand of these fillings, with the gold running to the cutting edge of the teeth. This makes about five a week only, or less than one a day. I sometimes do several, and on one occasion as many as five in one day, and to balance this several days may pass without any of that class of work.

The record says that less than thirty of these fillings have failed, as far as known. Careful examination of the cause of failures proves that the principle is a success and that the failures were due to reasons which can be avoided as a rule—such as improper anchorage, improper condensation of gold, imperfect margins, etc. I can think of many mouths where many tooth restorations have stood upwards of ten years and not a defect has appeared—mouths of young and old, teeth with and without pulps living, teeth of good, bad and indifferent structure.

Suppose the failures to be ten times greater than ascertained, by some patients moving away or not reporting, this would only make a ten per cent. failure running twelve years, which would be as good as any class of fillings on the teeth.

The pinnacle of success can be obtained by thoroughness in all the details of the careful bevels, the thorough anchorages, the solid condensation of gold, the beautiful curves and artistic finish.

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#### PROFESSOR MAYR REPLIES TO DR. FLETCHER.

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##### TO THE EDITOR OF THE DENTAL MISCELLANY:

If it was not in the interest of the cause I would not answer the three virulent little epistles Mr. Fletcher of Warrington, England, launches against me. First, his letter to the *DENTAL MISCELLANY* of July, 1881, then his criticism in the *British Journal of Dental Science* of June, 1881, and finally his anathema against American dental associations in general, because they listen to such awful chemists, who do not import their inspiration from Warrington, England. Neither my time nor the intrinsic value of these three

communications, nor, least of all, the patience of your readers would justify me in entering upon them in detail. I only will pick out a few of the grossest inexactitudes the "accomplished chemist" committed.

First, in his criticism in the MISCELLANY of July, 1881, I find the passage, "In good amalgams the contraction, when it exists, is so small as to be measured only with the greatest difficulty." I hardly know where to commence criticising the amount of inexactitudes in this little sentence. A scientist, Dr. Fletcher, must be exact; that is the first demand of all. Now, of what amalgams do I speak in my essay? Of chemical amalgams with a formula, with a composition expressible by such a formula. Dr. Fletcher answers by talking about dental amalgams. Between a chemical amalgam and a dental amalgam there is the same difference as between the chemically pure saccharose and the sugar-beet from which it is made; what holds good of the former will not hold good of the latter. Then what does the term "good amalgam" mean exactly? We do not have at all the term "good" in chemistry; a chemist criticising another chemist should use exact terms.

Further, the train of thinking ought to be rather opposite. An amalgam may be called "good" because it shrinks little, but it does not shrink little because it is "good." Then the contraction or expansion is a very easy thing to measure, for any one with an analytical balance who knows to determine the specific weights of the substances before mixing and after the mixture has "set," there is no "greatest difficulty" about it.

Thus I might show almost sentence for sentence to be vague statements of a critic who thinks simple bullying, after carelessly reading a well-reflected statement, is sufficient to refute a chemist who knows clearly what he says.

Then Dr. Fletcher describes quite an illustrative example of a scientific experiment. As a chemist he might give figures for the proportions of mercury and silver, etc. But to be fair, I have tried his experiment. What concerns the expansion I cannot say yet very much because the tube has not yet burst, but I do not doubt that it will if Dr. Fletcher will have the scientific kindness to give the proper figures for silver and mercury. A scientific experiment must be given so that it can be repeated successfully every time under the same conditions. Something is remarkable in mixing fine pure precipitated silver and mercury—*i. e.*, the rise in temperature while



the silver becomes impregnated with the mercury. It amounts to about 50–60 degrees Fahrenheit; yet even this is no sign of chemical combination, since Pouillet—an undeniable authority—in his many experiments about the rise of temperature in mixing fine powders and liquids, has found that in moistening the powder of organic and inorganic substances with water, the rise sometimes amounts to 15 degrees Fahrenheit “without any chemical combination taking place.” This means, for 1 gram of the mixed substances—say powder of beech-wood and water—taking into consideration their specific heat, etc., about 6 heat-units. These 6 heat-units freed in mixing 1 gram silver and mercury with a specific heat of about .05 would produce a rise of 120 degrees Fahrenheit, simply by the capillary attraction, without any chemical change. It is therefore plain that a rise of 60 degrees does not yet indicate chemical combination, since a rise of 120 degrees might still be accounted for from analogies by capillary action.

He further mentions the extraordinary avidity with which the mercury is taken up. I have to suppose that he means chemically “taken up,” since he criticises the essay of a chemist. This is only a term of his flowery language. The relative slowness of setting shows no “extraordinary avidity” in chemical sense as far as this word can be used in chemistry. We may speak of “extraordinary avidity” of potassium for oxygen, of fluorine for silicon, etc., because with these elements the combination is almost instantaneous and the product immediately formed; but if that formation takes days it is a gross misuse of words to speak of “extraordinary avidity.” What would be “ordinary avidity?” To illustrate the “avidity” with which silver takes up mercury I will only mention the observation of Daniell: “A rod of pure silver dipped in mercury takes up a little mercury in twenty-four hours; in *six weeks* it still is ductile, hardly any combination has taken place, etc.” Many interesting points about these silver amalgams might be said. Gmelin’s hand-book contains two pages all in accordance with what I stated as true for chemical amalgams.

Dr. Fletcher speaks of “intense hardness” of the silver amalgam. In criticising a scientist, Dr. Fletcher, it is safe to use the words with their exact meaning. Now “hardness” is not an absolute term, it only has sense with reference to a certain standard. The standard of hardness for a dentist is probably the tooth substance. It may be the steel he uses. At any rate it is some-

thing harder than calcspar. Our standard is neutral. Everything that scratches it is hard, everything that is scratched by it is soft. Taking the tooth substance as the standard, emery may be called very hard; diamond, even with a poetic swing, intensely hard; anything softer than a tooth is soft; gold is soft, tin very soft, etc. Now Dr. Fletcher's silver amalgam must rank near emery in hardness. Or did Dr. Fletcher use the table of hardness of the mineralogists, in which tooth substance stands between 4 and 5, calcspar 2 and 3, hard steel between 5 and 6, emery 9 and diamond 10? The middle is hard steel; everything softer has to be called soft; anything harder is hard. With those shades a person may choose. As long as dentists do not fill teeth with tallow or wax and compare this silver amalgam with this standard, the term "intense hardness" applied to a soft substance—the amalgam is about as hard as fluor-spar—must be considered a gross exaggeration. I knew well what I meant by saying "all silver amalgams are very soft." Perhaps I might have left out the "very."

I am glad that Dr. Fletcher filled a gap where I had to declare my inexperience about the effect of gold and platinum in dental amalgams, though almost every sentence contains inexact or vague expressions; not those of a scientifically exact writer.

Somewhat further on Dr. Fletcher writes about platinum amalgams as if they knew how to make them only at Warrington. Does he suppose, any chemist worth that name knows less than half a dozen methods to get platinum into an amalgam? It is a dangerous sally to suppose that easy things cannot be done by another, since it reflects back that the one supposing it considers them as difficult, and when it comes to difficult things that they are beyond his capacity. What I had in mind—and my expression of "mercury evaporates from platinum" shows it—was the well-known experiment, that one may amalgamate *superficially* a platinum sheet and heat it, when all the mercury will go off without apparently leaving any trace of combination. That the "absence of gold gives peculiarities" to an amalgam reminds one of the definition of salt as "a spice which spoils victuals if not put in." Is there no school of logical philosophy at Warrington?

Further on he doubts my experiments about the oxyphosphates resisting more than oxychlorides. I used purposely the term "resisting," without specifying to what, simply because they last longer in the mouth. He evidently tries to bring the question to

the supposed fact that my oxyphosphate was better made than my oxychloride. Would he like it if I should suppose him to be careless in his experiments? But I was not without backing. I did not write that statement without having read the experiments, confirming mine, of J. M. Thompson, F. C. S., given at the meeting of the Odontological Society of Great Britain, of November 3d, 1879, who finds that "Fletcher's dental porcelain (oxyphosphate) and Poulson's cement (oxyphosphate) were very little acted upon by acids (.001 to 100 water), but Fletcher's oxychloride of zinc and Ash's rock cement (impure oxychloride) were acted upon to a greater extent." But this chemist surely did not have "well-made oxychlorides!" Now, Dr. Fletcher himself granting that the oxyphosphates have greater mechanical hardness, the chemical experiments agreeing that they resist more to acids than the oxychlorides, there follows that the "resistance," which is the sum of both hardness and chemical resistance, is greater for the oxyphosphates than the oxychlorides, just as I asserted.—Q. E. D.

So far his first encyclica. His second missile was answered for me to a great extent by the kindness of the editor of the *British Journal of Dental Science*. To give the American reader a good specimen of his scientific superiority (?) I will quote how he speaks about the scientific modesty I found appropriate to use: "Two things he (Professor Mayr) states can readily be taken for granted. First, 'That his practice in dentistry is very limited.' Second, 'That the task he has undertaken is almost too difficult for him.' Any one reading his paper with a knowledge of the subject would at once give him credit for correctness, at least on these two points. Why he should attempt to do what he has done, knowing so well his own incapacity, is hard to see." Did Dr. Fletcher ever know any real scientific man who did not display a large amount of due carefulness and modesty? Only the man who knows little thinks he knows everything, and tries to bully those who, by long study, have become aware of the immensity of science and their own inadequate knowledge. Now, doctor, do you suppose you are better able to deal with the subject than I? If "Yes," please give to the yearning dental science your very best, and—I will be your critic! But as long as you cannot afford anything but vague terms, "ball-faced pluggers," etc., the boomerang about incapacity does not strike me. The only difference is, that I had the courage to give the clear opinions of a chemist—not inferior to any in Warrington, England

—while Dr. Fletcher shrouds himself into an assumed superiority which would permit him to read but inexactly my statements and talk vague things about them.

If the space occupied by me was not already too great I would show how Dr. Fletcher again had no clear idea of what he meant in criticising me about my term that amalgams become "cemented to a tooth." I maintain what I said, and should only wish Dr. Fletcher to be fair enough not to understand "cemented" here in the sense of "cement-steel," "Portland cement," etc.

The editor of the MISCELLANY answered Dr. Fletcher's objection to my statements about the oyster stew and ice water.

Now, the last epistle in the MISCELLANY of August, 1881. This last one was too hard for me. I became prostrated and a prey to nightmares. In one of them I had a vision of the day of the last judgment. All the murderers, etc., were done away with. The great book was opened, and a page was written in blood, "American Dental Societies." Among the crimes stood prominent that "People talk there for the sake of getting their names advertised." Drs. Atkinson, Kingsley, Searle, and chiefly the C. V. D. A. trembled. And the voice of God was heard: "Mr. Fletcher! please step this way! I do not feel myself able to deal with those fellows severely enough, and then I do not understand the subject as well as you. Please take my throne and judge those fellows with intense hardness." I fortunately awoke before I could hear the sentences pronounced.

CHARLES MAYR, A. M., Chemist.

SPRINGFIELD, MASS.

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## "COMMENTS ON MODERN DENTISTRY."

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BY DR. J. P. GERAN, BROOKLYN.

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THE article by Dr. G. W. Weld, in your August issue, I cannot let pass without remonstrance in behalf of a principle of much practical importance. Some of his ideas are, I consider, pernicious, and tend not only to mislead our patients but to shock the confidence of the student in his teacher.

Webster was once asked if there was room in the law for more lawyers. He replied, "Yes, at the top." The same answer will apply to dentistry. Let a man commence at that point to which the best have attained, having a proper dental education, a thorough



knowledge of the use of the mallet, cohesive gold, rubber dam, continuous gum, and the vegetable basis for plates, and go on from thence to attain higher degrees of eminence, then he will begin to reach that high status that every true man in a profession should aim for. Let us defend and inculcate in the people a greater fidelity, and raise the standard of instruction, then we shall find men pushing forward from the humblest origin to the highest pinnacle. This can be done in the arts as well as in the grand and impressively illustrated example of the one who to-day lies low, suffering from the assassin's bullet.\*

I fear there is the sort of old fogysm in the Doctor that I recently found in a boarding-house. The good landlady served up some watermelon with the rind taken off, leaving nothing but the delicious pulp. When passed to the guests one (a fossil) pushed it away, saying, "Give me a piece with the rind on: I don't want any of your new-fangled ideas."

He speaks of the injury of the status of dentistry by the use of hard rubber base plates, but does not say that by the use of these materials the poor, as well as the rich, can have artificial dentures, and which, with true artistic skill and the improved "molded teeth," can be made to look as near perfect as with "carved" ones. I deny that these materials "retrograde" the profession. When we look back and see some of the dentures "made on gold with carved teeth"—said teeth looking like infant monuments in a graveyard—with space between the gum and plate for the secretion and decomposition of animal matter, we cannot help exclaiming, "Is it possible, in this enlightened age, that there is a man still living who recommends gold instead of these non-secreting materials?" I think the profession will bear me out when I say that some of the finest efforts in artificial dentures are made with "molded teeth" and the above-mentioned base plates.

That "boom and commotion that cohesive gold and the mallet created" will be echoed by the profession till the last note of Gabriel's trumpet shall die out, and the tick of the electric and hand-mallets will be heard as long as gold is used in its present form for filling teeth. "The great principles which underlie the profession, namely, the saving of the most teeth for the greatest number of people," will be "subserved," for these improvements

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\* Since the above was in type President Garfield has died.—ED. J. D. M.

have been the means of saving teeth that otherwise would have acted as "fertilizers" to Dr. Colton's "grape vines."

There is not a cavity in the mouth where soft gold can be used but what can be filled with cohesive gold. Because some fail there is no reason why others could not succeed. I could name a score of operators who would guarantee to fill any cavity with cohesive gold that he (the Doctor) will fill with soft gold. The beauty, marvelous taste and skill displayed by these said operators can be appreciated only by those who know how to manipulate cohesive gold and the mallet, and by their patients who are demanding their services.

Dr. Weld compiles the statistics of competitive operations performed by several gentlemen. By properly examining these statistics or record of those operations and their results it will be at once perceived that the amount of gold packed into the cavity by the various mallets is greatly in excess of any of the hand-pressure operations. To be sure much more time was required to introduce the greater amount, both aggregately and individually, in all cases, conspicuously so in the automatic operation; but can it be denied that in each case where the mallet, whatever its kind, was used, a filling more compact, solid and less impervious to moisture was secured, and, of course, a more durable and preservative one than in either of the hand-pressure operations! And also can it be denied that the additional amount of time required is both for the dentist and patient a good investment in the operation?

He who confines himself to these great boons is able to make an "improvement on nature." Take, for instance, the right inferior first and second molars decayed on the proximate surface; cause of said decay, the close contact from the cervical to the masticating surface. Press them apart, cutting away a portion of the proximate tissue of each. Then fill, rounding out the gold, and allow it to touch only near the grinding surface. By so doing you have free walls and a self-cleansing surface.

'Tis true, "the dentistry of the future will require something more than the title of D. D. S. to satisfy its ambition," for there is no branch of the healing art making greater strides, steadier and surer progress than dentistry. The time is surely coming when we shall have less labor to perform, and we shall be consulted for prophylactic treatment. This is a progressive age, and there is no body of men who fathom the science of their calling deeper than

those who have embraced this. But why should we wish to be enrolled under the banner of the M. D.'s? Have we ever received encouragement? Have we been recognized? Were we recognized by the International Medical Congress that met recently in London? Haven't we coddled them up long enough and tried to hang fast to their limbs, like the tormenting insect to the animal with long ears, and they kicked us off? These are plain facts, but facts nevertheless. Let us set up a standard of our own, and looking not to the things that are behind, press forward to a mark so high that recognition from the M. D.'s will add no fresh leaves to our crown of laurels.

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## TWENTY-FIRST ANNUAL SESSION OF THE AMERICAN DENTAL ASSOCIATION.

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HELD AT IRVING HALL, NEW YORK CITY, JULY 12TH, 13TH, 14TH AND 15TH, 1881.

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### SECOND DAY—MORNING SESSION.

THE PRESIDENT called the meeting to order at 9.30 A. M. The minutes of the previous meeting were read and confirmed.

Dr. FRIEDERICHs read a paper on "Cylinder Filling." Before doing so he said he did not expect that he should present anything new to the profession, but at the same time he thought he would bring the matter out in a new light. The method which he advocated originated with Dr. J. S. Clarke.

The following is an abstract of the Doctor's paper:

In these days of cheap dentistry and in the face of the "New Departure" (which is synonymous with cheap dentistry and want of operative skill), I desire to call your attention to the method of cylinder filling with non-cohesive foil, brought before the profession by the late Dr. J. S. Clarke, the author and inventor, at the first session of the American Dental Convention, held in Philadelphia in the year 1855.

In giving his invention to benefit mankind and his co-laborers in the field of dentistry, how was it received? I am sorry to say, with indifference. In fact, if I have read the transactions correctly, it was "nothing new under the sun," and so stated by some present at that Convention, who stultified themselves by trying to describe their method of manipulating gold foil in the form of cylinders.

I am well aware that at our annual reunions is not the time and

place to teach dentistry; nevertheless, in bringing this subject before you, I am in a measure compelled to demonstrate: 1st, the manner of preparing the cylinders (as those prepared by the manufacturers of foil are only in part practical); 2d, the instruments necessary with which to pack them; 3d, the manner of introducing them in order to make an impervious and solid filling.

It stands to reason if we fold a sheet of No. 4 foil upon itself we shall have the sheet one-half the size in the shape of a parallelogram, but double the thickness, and if this process is repeated five times we shall have a strip of foil thirty-two times the thickness of the original sheet, and so on. But as the layers of foil increase the flexibility of the sheet decreases and it becomes less pliable. Therefore, in order to make small cylinders and yet leave them soft and pliant, the sheet must be cut into halves, thirds and fourths, and it is the smaller size of cylinders that are not yet in the market; wherefore, those who use cylinders entirely in filling are compelled to prepare them themselves. Besides, applicable cylinders are yet to be prepared by the manufacturers of dental materials, for should I be compelled to rely upon those already prepared I doubt very much (though I have practiced cylinder filling for the past thirty years) whether I could make a compact filling with them, and I have no doubt but that this accounts in a great measure for the reason why this method has not been more generally adopted by the profession.

The instruments necessary, and without which no cylinders can be made, are similar in shape to Nos. 19 and 20, designed by Dr. G. W. Redmond, exhibited in Dr. Garretson's system of oral surgery. To form a set of these a dozen sizes at least are requisite—round pointed, turned at an angle of about 35 degrees, slightly tapering from shank to point, and spring tempered. The smallest in diameter should be about the thickness of a cambric needle, the next one a third larger, the length from shank to point should increase, and so on. The manner of manipulating the cylinders is accomplished by choosing the first one of as large a size as can be conveniently introduced into the cavity to be filled, the cylinder being of sufficient length to protrude somewhat above the orifice of the cavity in order to have material for condensing when no more gold can be introduced. This first cylinder is then forced against the parietes of the cavity by introducing the largest size of the above-mentioned instrument that the cavity and cylinder will



admit of, when space will be found for the introduction of the second cylinder. When the cavity is full, although not densely packed, one of the small sized instruments aforesaid is then forced in between the cylinders. This opening is then enlarged by the next one in size, repeating this process, being governed by your judgment as to how much lateral pressure the tooth you are filling will stand, as otherwise, if this pressure is carried too far, there is danger of splitting the tooth.

In regard to ideal fillings the material employed must be indestructible in the oral cavity, it must be packed sufficiently solid so as to render it impermeable to fluid, it must be flush with the orifice of the cavity and finished in such a manner that it can be kept clean. A sheet of foil is still a plate of metal. When the sheet is folded the tenacity increases; therefore, when a cylinder of gold foil is placed in a cavity of a tooth, you have a lamina of gold that reaches from the bottom to the surface. Consequently, a cylinder filling never comes out piecemeal. Lateral pressure being brought to bear on the gold, while still soft, from the commencement, and continued to the end of the operation, a perfect adaptation to the parietes of the cavity must ensue. Where a tooth is strong enough to bear the pressure a solid filling can be put in by lateral pressure alone. Rubber dam may be entirely dispensed with. No matrices are required to fill proximal cavities, for if you let your cylinders protrude sufficiently beyond the orifice of the cavity they can be furnished up to give the desired fullness you wish to obtain. Submarine fillings can be made with them. By this method an impervious filling can be made with more certainty in less time and with less labor than by any mode practiced up to the present time; for, after a cavity is prepared and ready for the gold, it can be filled by this method, provided the cylinders are ready made, in ten minutes, whether the cavity is large or small, whether it is situated on the grinding surface or in a posterior proximal cavity of a molar—that is, if your gold is packed ready for surface condensing and finishing in the time above specified.

There is only one thing that cannot be accomplished with cylinders, and that is an artificial crown cannot be built up by them; but aside from this, whatever can be done with gold in the mouth for the preservation of the teeth can be effected with cylinders. Crystal gold and cohesive foil was a god-send to thousands in our

profession, for it enabled them to put some kind of a gold filling that would stick for awhile in a tooth. A cohesive filling is either a good or a very poor one. The only true method by which a root filling can be made with any certainty is on the principle of cylinder filling, for, the gold rolled in a cone, the shape of the pulp canal becomes in part the instrument by which the object is accomplished. The value of gold as a material is, comparatively speaking, of no consequence in the filling of the teeth. It is the skilled labor and time required that are the valuable factors in the case; therefore, if a sufficient number of fillings can be put in by whatsoever method, a fair remuneration for the skilled labor employed is obtained, whilst if it takes three hours to insert one filling the fee exacted must be in proportion to the time and labor expended. Hence the cry by a certain class for a cheaper material, on the plea that this style of work places the services of the dentist out of the reach of the majority of people.

Again, how can you reconcile your consciences to the fact that in packing and malleting your patient for hours you make him suffer the torments of the damned, while our predecessors in dentistry accomplished the same object without entailing one-fourth the suffering? . . . What are the consequences that follow—gutta-percha, oxychlorides and amalgam are invoked, and these are placed on a par with a material that has stood the test of time.

#### DENTAL LITERATURE AND NOMENCLATURE.

Dr. TAFT said he had no report to make upon section 3, "Dental Literature and Nomenclature."

Dr. ATKINSON had a word to say upon the subject of Nomenclature. He was fully aware of the depth of the subject of the paper that was read on the previous night by Professor Andrews. He noticed a disposition of restiveness among the members last evening while the paper was being read that he was sorry to see at this late date in a body like the American Dental Association. He was sorry for the motion to postpone this matter made by a man he (Dr. Atkinson) had regarded with a brotherly care. He was sorry cold water had been thrown upon the subject, and that was the reason why he was annoyed. It amounted, however, to nothing more than annoyance. The paper read was the continuation of the subject of "Terminology," which had been before the body before. He was convinced that Professor Andrews was the only person who had the key to enable them to express what was

going on in their minds. He regretted the disposition to resist the subject. It appeared to him that those who opposed this matter were being stultified by the conviction that they knew all about dentistry. Those men had better take care or they would be shown up for obstructing the advance of professional truth, they would be pursued or pushed from the positions of elevation they now hold—shoulder-strapped by the schools that pretended to make dentists.

As was pointed out to them last night, it was through the want of just such a system as that advocated these brilliant men made blunders. He would ask their patience for one or two years more and he would then be able to demonstrate to them, to their entire satisfaction, the reliability of what had been stated. They would then be the centre of the real intelligence of the entire world as far as literature went, and they would no longer be shoulder-strapped as they were. If they would enquire how they differed and try to learn how each individual stood they would be better angels of light for the instruction of the body. He had not time, nor had they inclination, to follow the depths of the paper read last night. Many of the lights of dentistry had gone into his office and had not given him so much evidence of their affection or regard as to even ask to see his reports upon that subject. Good God! were they in such a position as that? He would rather be cut up in pieces than have such a lack of the desire to know as that exhibited by many members of the profession. What was that body for? There were some pamphlets there and he would advise them to take them home with them and read them. They would only cost fifteen cents each. One or two years more would enable them to complete that matter, so that it should be no longer the position of the body to be satisfied with filling teeth, roots, etc. (Laughter.) He would remain on the platform for the purpose of being asked and answering questions that might be put to him.

[The Doctor here asked them if the audience desired to question him, but a dead silence prevailed.]

The silence of the body informs me (the speaker continued) that there is no desire to be informed. "Would God ye were either hot or cold, but because ye are lukewarm, and neither hot nor cold, I will spew you out of my mouth." I say this now to you in humble repetition, because those words are the outcome of the highest wisdom. God bless you. (Applause.)

Dr. WATERS, Boston,—I have read Dr. Atkinson's report. I consider its author an inventor and discoverer in that line, and he is as much an inventor as any one who discovers a new machine or a new instrument. The thought that came to me as I listened to Dr. Atkinson, and I looked around and saw how little interest was taken in what he was saying, was of a boy who had been to Europe and his mother sent him to a German school, and when he came home his mother asked him what he had learned. He said nothing but goloshes. These were rubber overshoes which all the children wore, and which were put on one side whenever they went out and in and they were constantly talking of their goloshes, so he, consequently, got hold of the word. And so it is with people when a new idea comes before them. Men are children, children of the larger growth, and they do not understand a new idea; and so it has been with Dr. Atkinson and his paper of last night. Now I would say that this is the going forth of a soul—it is a new start in life. It is just as true as that you and I are here, that somebody at some time is going to take up this subject and build it up. There is a great deal of old fogysism in the land, and when it takes a lifetime to build up old fogysism it takes a lifetime to take it out. The meaning of Dr. Atkinson's paper is as clear to my mind as that "though" should never be spelled that way, and taught in such a manner in our schools. I cannot go to work and discuss his paper, but I can say this much of it—I hope he will the next time give a *resumé*, and go over the whole ground that we may be able to see there is something in it. (Applause.)

Professor S. P. ANDREWS said that, although not a member of the Association, he would like to make a few remarks. He hoped they would give him an opportunity to say a few words to show what relations sounds had to dentistry. Dentists should know what dentals were. Dentals were those sounds which were produced by the point of the tongue being placed against the teeth, and people who had not teeth could not pronounce them well. The peculiarity of our language compared with the German was that we pronounce the words too hard. We say "God," the Germans say "Gott." The cavity of the mouth divides into three departments—one at the back mouth called the throat, one at the middle mouth, and at the front mouth where the lips were brought together.

[The Professor here asked those present to pronounce one or two words that he would give them aloud, just as if they were a class



and he were giving them a lesson. Several members of the audience then pronounced the words "pie" and "my," at the request of the speaker.]

He then went on to say that these words brought the lips together. These were the only sounds that were made by the lips in all the languages of the earth. There were no other two sounds that could be made by the lips. The mouth for the production of sound was an instrument just like an accordin. A good dentist's duty was to make people pronounce distinctly. If a dentist did not feel the need of a knowledge of the mechanism of sound he was to some extent unfitted for his profession. There was a close relationship between the science of dentistry and lingual sounds. Dentistry and linguation must be very closely related to each other—the science which related to the voice and the science which related to the teeth. (Applause.)

#### OPERATIVE DENTISTRY.

The PRESIDENT asked if there were any papers on operative dentistry. The question of filling teeth or roots was before the Association.

Dr. G. A. MILLS said all those who listened to Dr. Wetherbee and Dr. Atkinson last night should note the fact that there was a modicum of good in all that they put forward. Dr. Wetherbee was capable of doing things which other men could not do. He would not undertake to explain his abilities to do things which other men would fail in. Every man knew that there were exceptions to rules, and in root filling they encountered great difficulties—from each of their experiences they gained wisdom. Dr. Atkinson, according to his mind, had given them principles which it might be well to carry into operation. They all in the course of their practice met difficulties. When they came to tortuous cavities let them find their way through them. A great deal depended altogether on the power which lay in a man. Men would ask, "What would I do in certain cases?" He could not communicate the methods he would adopt in certain cases, for he worked in a certain way with some constitutions and a different way with others. All dentists had their different ways of working. The trouble with the dental profession was that they had too many men in it who had no love for it. He was, however, glad to say that they were going up higher in the profession.

Dr. M. H. WEBB said that many of the pulps were either destroyed or had died. Gold was in every case the best material to be used. Where a broach could be got to go to the end of the root it could in that case be closed with gold. That was a most important point in filling roots. Gold was a material that could be applied if the operator could reach the end of the root. Cylinders could not well be got to the end of the root. Fibres of cotton saturated with carbolic acid was a good thing to use. In order to get to the point, let the operator get as close as he could and not press too much, but he should press enough to know that he gets close to the root.

He urged upon them not to abuse the mallet, for the mallet was, he was sorry to say, abused many times. Chloride of zinc prevented putrefaction. Where an abscess was threatened, or had taken place, then in almost every instance it was necessary to drill through to the end of the root into the pulp that was diseased. If they knew from the exudation that that was a good healthy protoplasm instead of pus, then fill the root. They should never fill the root of the tooth, unless they knew that it was a root that ought to be filled. They should find out exactly the end of the root—find it so that they could press the filling-up into place. Then put oxychloride of zinc round the wire and put it up into position. In regard to roots where they could not reach the forama with a broach, in many cases they could reach with a drill. With the smallest size of Gates' drills they should follow up to the end of the root and enlarge it, and as they got there they would see that the patient felt it.

When drilling they should see that they did it safely. He did not think the teeth should be drilled as much as they were. He did not believe in cylinder filling. It was, in his opinion, better to fill large cavities with oxychloride of zinc than with cylinders. Filling teeth was delicate work. It would not do to fill teeth as we would tumble potatoes into a barrel. They should get in all cases a point to start from, and build upon it until the structure was finished. If cylinders were to be made, they should of course be made of non-cohesive gold, because cylinders that were cohesive would stick to each other, and interfere with what these men who use them claim them to do.

Dr. SHUMWAY said that he would not allow any dentist he ever saw to drill a hole through the root. (Applause.) He would not do to any patient what he would not allow to be done to himself. He would not have any hole filled through the root. That matter

of teeth filling was rather threadbare. He was there to advocate cylinder filling, and to oppose the use of the mallet. He would not allow any man to put a mallet to his teeth unless it was for the purpose of filling a tooth to arrest decay—then he might do it. The mallet is a dangerous thing to use; there is nothing remedial in it. All the recuperation that is in a tooth must come from the tooth itself and not from without. They struck a tooth with a mallet and did just the very thing that nature did not want to have done. Supposing a person were to go to an oculist with a diseased eye would he take a mallet and hit it? And there is just as much sense in striking a tooth with a mallet as in striking the eye if it is decayed and you wanted to preserve it. Disease is the same, whether it is in the tooth or in the eye, for it is all decay. The process of dissolution is the same in nature everywhere. Cylinder filling allowed recuperation to go on in the tooth.

Dr. BECK said that about eighteen months ago he had a patient, a young man, who was addicted to no vice. Upon examination of a tooth that troubled him it was evident there was an abscess in the apex. (The speaker here made a diagram of how he found the tooth and how he treated it.) He went down to the pulp cavity and exposed it. He opened it fully with a Gates' drill, and very carefully went down to the pulp chamber. Before he was aware of it he went out to the end, and a copious flow of pus passed out. Then he inserted a broach and felt round the apex of the root. He inserted a drill to remove the rough edges from the apex of the root. He then communicated a solution of carbolic acid and water every day for one week without any apparent effect. He then used chloride of zinc, ten grains to the ounce, without effect. He treated **the** tooth for six weeks every other day because his patient was so fixed that he could only see him every second day. At the end of six weeks he inserted cotton saturated with carbolic acid, being careful not to allow it go out to the root. After he had done that he filled it with rubber, and by delicate manipulations succeeded in filling the entire cavity with rubber. That had been in for eighteen months, and the patient had complained of no pain. The tooth looked remarkably well, and he believed it would be a successful operation. In filling roots he thought they should use their judgment a great deal. As for the mallet and the comparison between the eye and the tooth made by Dr. Shumway there was no comparison at all. The eye was a more sensitive organ than the tooth.

He had been using the electric mallet for some time and he would sooner part with any other instrument than it.

Dr. SHUMWAY—It is simply a question of method—whether the old method shall be given up for any other. No one stands up here with less claim to originality than myself. There is a way of preparing cylinders that I think a little improvement upon the old method. I would like to show it to you. Both of the gentlemen who spoke in regard to cylinder fillings said that they should be made of non-cohesive gold. I suppose they did not mean by that, non-cohesive gold as Abbey's, which has something upon the surface, solution of iron or something else, to prevent it being made cohesive; but unannealed gold, which can be made cohesive by simply subjecting it to the heat. This is what I have heard is unannealed gold.

Dr. C. S. BECK—Is not virgin gold cohesive?

Dr. SHUMWAY—It has the property of cohesiveness undeveloped. This is unannealed gold which is made cohesive by heat. [The speaker here showed a method of making cylinders and passed them round among the members.]

Dr. LA ROCHE said the cylinders they saw made there by Dr. Shumway he did not think were, properly speaking, cylinders. They were more like pellets. They were certainly made very quickly, but, nevertheless, he thought they were made a little differently from the usual way of making cylinders when you fill the teeth with cylinders entirely.

Dr. SHUMWAY—I simply say the cylinder was cylindrical in form.

Dr. ANDREWS said he was acquainted with the work that Dr. Shumway did and he knew it was good.

Dr. CROUSE remarked that it was said that morning that the subject of root filling was worn out. The matter of drilling through the roots of teeth was what he wanted to speak about. The gentleman who said he would not allow any one to drill through the root, or to use a mallet, put him in mind of a patient who said he would rather go to hell than have a tooth filled, so he (Dr. Crouse) told him he had better go to hell. (Laughter.) There were some operations made more pleasant by the mallet than by the hand. Dr. Shumway would not like to fill a tooth with gold with a mallet. He (Dr. Crouse) was an advocate of hand-pressure, but, notwithstanding that fact, he would give up the use of the mallet sooner than he would give up his profession.



Dr. SHUMWAY—You will do that, too, some day. (Laughter.)

Dr. CROUSE went on to say that there were a great many cases where a better cure could be effected by forcing the instrument through and bleeding it. They should give nature a fair chance. One of the speakers said that morning that once in two days was the only time he could get at his patient. It would be well for the patient if he lived farther away (laughter and applause). As to the filling, he did not know anything better than guttapercha for that purpose. A good way is to start a little piece of guttapercha up the canal; then wrap a little cohesive foil around a fine broach, hold it in the flame of a lamp until it is red-hot, and shove it up before it has had time to cool. Withdraw the instrument, giving it a turn to dislodge the foil, and leave the foil in the cavity. He thought each man had his own way of operating, but he thought the best way was to fill the tooth with something that was indestructible. If he were to fill a root in the way he had described he would go from the inside. As to the matter of cylinder filling he was very glad that matter had been brought before this body. He was glad to see there were young men there who were using cylinders. He did not think they should go out of the profession until they got something better. Cohesive gold was well in its way. In filling teeth they should do it with the least time and expense, both on the part of the patient and the dentist, and that was what brought him into cylinder filling. He liked the old plan of rolling cylinders, as he could fill an ordinary cavity with quickness and satisfaction. He used to be a cohesive foil man until he met a case where cylinders were used. That put him thinking that there was something wrong in the man who used only cohesive gold. Another excellent material was tinfoil, used in conjunction with gold. There was, however, one objection to it. He had a case from a foreign town, a woman who had a lot of difficult cavities. He filled with tinfoil and finished with gold. She afterwards went to her local dentist, and when he had examined one of her teeth he told her to go back to the man in Chicago who had filled the cavities. The one in question was black. For a proximate surface he knew nothing better than a good cylinder, put in in a delicate and careful manner.

Dr. WETHERBEE took issue with the last speaker concerning the cylinders. The issue was not as to the practicability of using soft gold, but it was whether there could be as good filling with cohesive

gold as with soft foil. The statement was made that a competent man could in all cases make as perfect a filling with cohesive foil as with non-cohesive. Let them for a moment consider what were cylinders. The style of filling adopted by Dr. Shumway was not the proper method according to his idea. If they were to use cylinders the best way was to make the cylinders in the form of pellets, preserving the laminae of the gold. Dr. Shumway's objection to the mallet was owing to his being a ladies' man. If he (Dr. Wetherbee) had a delicate tooth to fill he would use the mallet with the teeth, not that his touch with the hand was not as good as his neighbor's, and he would fill the tooth with perfect ease. His patients, when first he commenced the use of the mallet, objected to it; now forty out of fifty would rather have the mallet than the hand-pressure. With the mallet one never slipped, but with the hand one did.

Dr. SHUMWAY—I would like to mention a case that came to my notice last week of a lady that had a tooth filled in Chicago. A hole was drilled up the root and the gold was malleted to send it through, and the result was, a discharge of pieces of gold almost as large as shot came out of the opening, and you can now nearly put your little finger into it.

Dr. PALMER said Dr. Crouse introduced a process there which needed a little explanation, and that was the use of gold and tin combined. That had been a study of his (Dr. Palmer) for seven years. When his investigations first commenced it was high treason not to consider gold the best under all circumstances. Now they could all discuss that point. It was better in some cases where the patient had money that gold should be used, but that was not the case with all patients. He would be as brief as possible in mentioning one or two things. They should first study the nature of the tooth. With the front teeth gutta-percha works very well. Let them go to the back teeth, which were generally filled with amalgam, and in regard to amalgam they were on the wrong track in getting it so fine. [The speaker here referred to a case where a patient who four years previous had her teeth put in good order and wished him, the speaker, to examine them.] There was, he continued, one tooth which needed refilling. Quite a number of them had been filled with amalgam. He removed all the fillings and refilled the teeth with gold and tin after the method of Dr. Abbott. This was a method of rolling up a sheet of gold and tin so that the

two metals in each lot came in contact. There was a change going on so that they became components. They were doing good service with one exception. He brought the cavity out to the crown of the tooth and commenced filling with gold and tin a portion of the cavity, perhaps one-half, and finished the rest with cohesive gold, and that was proper treatment. The gold and tin rolled together worked even better than tin alone, and the mixture was as hard as amalgam. He hoped that the young men there would take hold of that matter. It was better than amalgam. They had no material that was perfect (applause), but science was endeavoring to bring all out so that they could know exactly how they stood. He had not changed in his practice, he had made no discovery, there was nothing claimed.

Dr. CROUSE—In regard to the division of tin and gold, unless you mix in about the same proportion, oxidization is taking place so as to absorb out a certain portion of the tin.

Dr. PALMER—The tin and gold should enter so as not to have any portion of it washed away.

The meeting then adjourned until 2.30 P. M.

*(To be continued.)*

## DENTAL ASSOCIATION OF THE UNITED STATES OF AMERICA.

The second annual meeting of the above Association was held at Republican Hall, 55 West Thirty-third street, New York City, on August 8th and 9th. The attendance was small. The following is a list of the officers of the Association:

President, A. L. Northrop, New York; First Vice-President, Frank Abbott, New York; Second Vice-President, F. A. Levy, New Jersey; Third Vice-President, J. B. Patrick, South Carolina; Secretary, R. Finley Hunt, D. C.; Assistant Secretary, J. H. Smith, Connecticut; Treasurer, H. B. Noble, D. C.; Assistant Treasurer, Frank M. Odell, New York. Executive Committee—Frank M. Odell, John Allen, J. C. Sproull.

The PRESIDENT called the meeting to order shortly after 11 A. M. on Monday, the 8th of August.

Dr. JOHN ALLEN offered up prayer.

The business transacted was of a routine nature.

AFTERNOON SESSION.

The PRESIDENT called the meeting to order at 3 o'clock. The minutes of the last meeting were read and confirmed.

The PRESIDENT said he believed Dr. Odell had a paper to read.

Dr. ODELL said he had, but he was sorry to say that the subject of the paper only arose in his mind on Friday last. The idea struck him that it was necessary that some one should do something for that organization in the way of scientific work. With such a limited time at his disposal he had been unable to work out what he wanted, but if he succeeded in giving it a right start he thought he would give them an idea of what the paper would be if it were brought to perfection. The subject was suggested to him by the hot weather they had lately experienced. During hot weather some people suffered very severely : some with itching and burning. On rising in the morning the eyes would be as red as beets and burning like fire. Others suffered from bronchial trouble. All this could be traced to the condition of the system. They had more sugar in the blood than they could dispose of. He had there a few pamphlets which advocated certain springs and water, and which were circulated by the million all over the land. Under certain circumstances, however, he was under the impression that instead of paying \$5 for six gallons of water from the spring they could take the ordinary river water anywhere, distil it, and they would get about the same result. One of the greatest therapeutic agents they had was plenty of water, and whenever it came to his lot to prescribe medicine, such as Epsom salts, for instance, he always advised it being taken in plenty of water. By getting plenty of water into the system the operation went on easily, but people would take anything else sooner than take water. If one had diabetes and wanted a drink he would tell them to take water. Another would say take soda. If he took that he took the very thing he should not take, as it contained sugar. It struck him that they could make in their therapeutic department a proper figure of treating that subject and they then could give comfort to their patients. He would recommend glycerine for heat. It was recommended by many physicians. The skin was often excessively aggravated during hot weather. He knew of an old lady almost ready for the lunatic asylum in consequence of this irritation. Bicarbonate of soda was a good thing for it. If the trouble was in the skin he would wash in such cases with a moderate solution of soda. In two minutes it would be all



right, renewing the application from time to time. He had only just got to the name of his subject up to the present. He should like to put the paper in such a shape that they might see some one department of the subject carried to its ultimate object or cure.

The following is Dr. Odell's paper.

#### LITHIASIS.

Whenever the proper and perfect elimination of the products of the retrograde metamorphosis of tissue is interfered with, according to the extent of that interference pathological conditions immediately supervene.

Whenever there is omission of, deviations from, or obstruction to regular progression in any of the processes of digestion or assimilation from the act of prehension through the various stages of mastication, insalivation, deglutition, chymification, chylication, dilution, absorption, fecation and defecation, in functional perfection, pathological sequellæ, more numerous and diverse than are the operations here enumerated may be confidently anticipated.

From the process of stomach digestion, one constituent of the peptones thence resulting, starch, which during its transformation into sugar passes through several chemical changes, is a marked illustration of the foregoing so dogmatically laid down axioms.

When the product of tissual changes in the liver (which was, in 1848, by M. Claude Bernard named glycogene or glycogenic matter) is again absorbed by the blood-current, the regular order of its progression from its hepatic storehouse to somatic tissue nourishment would be by its first appropriating oxygen and hydrogen from the blood or any of the fluids, and being thereby transformed into dextrine, and by a farther oxidation and hydration into glucose; then by further oxidation becoming oxalic acid, or by a rearrangement of its atomic constituents changing to lactic acid; which again combining with urea becomes under further oxidation uric acid and water; or the lactic acid, continuing the process of oxidation and rejecting the urea, is resolved into carbonic acid and the lactates of soda and potassa; the last named of these processes or transformations is the desired ultimate object of these veto-chemical phenomena, and results in the production of body heat and the no less to be desired tissue-regeneration. But the arrestation or diversion (*per-version*) of any of these phenomena is productive of distinct and significant pathological conditions; distinct, because

evidenced by more or less pronounced symptoms, to which, or to many of which, special names have been by common consent attached.

In nearly every one of the transformations cited, we may readily trace either the deprivation of certain of the tissues of their needed alimentation, giving rise to one class of pathological manifestations, or, on the other hand, super-alimentation of tissues, giving origin to another class of symptoms. The first being synonymous with starvation, the second with repletion of tissual elements.

Again, if we have arrestation in process of chemical transformation, there necessarily results a loading of the various circulations with abnormal productions, now necessarily excrementitious and calling for increased and unusual effort on the part of some of the natural emunctories of the system, or setting up vicarious emunctories in the shape of fistula, abscesses, blebs, desquamations, concretions, etc., whence the origin of the almost innumerable so-called diseases, with their subdivisions and subdivisions of subdivisions, in variety of manifestation of malign presence.

Hence arise arthritic difficulties, articular rheumatism, or arthritis, chalky deposits, anchyloses, etc. Hence, also, bronchitis, asthma, emphysema, pleuritis, pneumonia, phthisis, tubercolosis, diabetes insipidus, diabetes mellitus, oxaluria, rheumatism, and gout or lithiasis.

Dr. R. F. HUNT, Secretary, said he only waited for some one on the floor to take up that subject and discuss it. He thought it a very important subject in its various relations. He thought the opening remarks of the paper struck the key-note of all the troubles that they had to contend with, either in their profession of dentistry or in medicine. He knew that there were gentlemen within the sound of his voice who did not take the same view as he did. In the investigations of these subjects, and in the conclusions that were reached as the result of these investigations, one conclusion was, that the cause of the pathological conditions of the human system, down to the destruction of the teeth, was to be found in the imperfect supply of aliment. That view of the case was therefore a correct one as far as it went, but they should not confine themselves entirely to it.

Dr. ALLEN—I must say that the substance of the paper struck me with great force, and I am glad that a member of our profession is able to take up such a subject and comment upon it. I think we

should devote ourselves more to these subjects, to look at these things pathologically and physiologically. I am glad our good friend has ventured to branch out in this subject as he has, and I hope he will be followed by many others.

*(To be continued.)*

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## ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

ORDINARY MONTHLY MEETING, JUNE 13TH, 1881.

*(Concluded from August Number.)*

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Mr. COLEMAN said he had a case to bring forward which illustrated the difficulties which might occasionally arise in the performance of what promised beforehand to be a very simple operation.

A patient came to him complaining of pain in an upper wisdom tooth; it was carious, and he accordingly proceeded to stop it. This gave relief for the time, but the tooth again became uncomfortable, and appeared to be a little loose. Mr. Coleman then extracted it; it came out very easily, but on looking at it, it appeared as if one of the fangs had been left behind, and on feeling in the alveolus a hard substance was met with, which he took to be the missing fang. But on trying to extract it, it was found to be smooth and quite unlike a broken root. On further examination this hard substance proved to be a second wisdom tooth, which was coming down above the first, and the pressure of which had caused absorption of the root of the extracted tooth.

Mr. COLEMAN also showed a model of an interesting case which had come under his care at St. Bartholomew's Hospital. The patient had a growth of a very hard unyielding nature on both sides of the lower jaw; it had been four years in forming. It had deflected the lower teeth inwards, so that the upper teeth bit on the external surfaces of the lower. Mr. Lyons removed the stump of the second right molar, and Mr. Coleman examined under the microscope some fragments which were adherent to the roots, but what he found was simply hypertrophy of the alveolar dental membrane. On the right side there was an opening apparently communicating with the growth, and here pulsation was observable, but no fluid could be pressed out of it. The model showed the dimensions of the growth, and also the deflection of the teeth.

The PRESIDENT said he hoped Mr. Coleman would at a future meeting give some account of the further progress of the case.

The Cavaliere ATKINSON, of Naples, showed several models taken from patients who had been operated on for tumors of the jaws, together with the plates, etc., by means of which he had filled up the gaps made by the operations.

The first was a model of the upper jaw of a woman, aged about fifty, who had been operated on for an osteo-sarcoma, almost the whole of the right half of the bone having been removed. The deficiency had been supplied by a carefully fitted vulcanite plate. The operation was performed two years ago, and the patient had never returned, so it might be presumed to have been successful.

Another showed the face of a patient who had been twice operated on for a recurrent tumor, resulting in the loss of the nose and part of the cheek. This had been supplied by means of a piece of semi-vulcanized rubber, carefully molded and painted, the result being that the disfigurement was not distinguishable at a distance of a few feet.

Mr. ATKINSON next showed some gold palate plates with vela attached, fitted with ingeniously-arranged springs, which he had made for aggravated cases of congenital malformation and syphilitic disease of the palate. Lastly, he showed models of two cases in which portions of the *lower* jaw had been removed, and explained that these were much more difficult to treat, on account of the slight support afforded by the remaining fragment of the bone, and the great tendency there was for this to be drawn backwards and inwards by muscular action. The great point in such cases was to begin the treatment as soon as possible after the operation, by inserting a gutta-percha piece, without teeth, to force back the remaining portion of the jaw into position. Then, having got the fragment again to articulate properly with the upper teeth, a model could be taken and a vulcanite piece fitted to supply the place of the part which had been removed.

Mr. F. CANTON remarked that the models which had just been handed round were so interesting and instructive that he hoped Mr. Atkinson would allow duplicates of them to be made for the Museum. He was much pleased with the arrangement of Mr. Atkinson's gold vela; he had tried them made in hard rubber, and with fair success.



Mr. HUNT said he had used Dr. Kingsley's plan of soft rubber vela for ten years past, and was quite satisfied with the results. When the velum was placed below the palate, as in Mr. Atkinson's plan, there was always a tendency for it to be forced down by muscular action; but in Dr. Kingsley's plan the velum was placed above and behind the cleft, and was held in place by muscular contraction. He believed also that the plan of placing the velum behind the soft palate gave greater clearness of speech.

Mr. ATKINSON said he should be very pleased to send copies of the models, with a history of the cases attached, to be added to the Museum.

Mr. CHENEY, of Manchester, showed a vulcanite plate the palate of which had been covered with gold foil and then vulcanized. Patients often complained that the vulcanite palate was hot; gold being a better conductor of heat was more comfortable, and a plate thus covered was very easily finished. He also showed an apparatus for approximating the central incisors; a very neat and ingenious mode of attaching porcelain crowns to natural roots by means of either white stopping or amalgam, which he had used for some time with good results; and also an upper denture of celluloid, showing the thickness the piece should be made to prevent its warping and splitting round the teeth. He believed that one cause of failure when celluloid was used was due to the practice of making the piece as thin as vulcanite, and not leaving sufficient substance round the necks of the teeth.

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#### THE CONNECTICUT VALLEY DENTAL SOCIETY.

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THE above society will hold its annual meeting for this year where it has been customary for years to hold it, at the Haynes House, Springfield, Mass., Thursday and Friday, October 27th and 28th.

All members are earnestly requested to be present, because at this meeting the final reading of the report of the committee appointed upon the revision of the Constitution and by-laws will occur, and every member should raise his approval or disapproval of the proposed alterations.

Programmes will be issued soon.

A. M. Ross, *Secretary.*

## SOUTH-WESTERN DENTAL SOCIETY.

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The second annual meeting of the South-western Dental Society was held at Columbus, Kan., in the office of Dr. J. O. Houx, August 9th, 10th and 11th, 1881, Dr. E. Hovey, of Springfield, Mo., President, in the chair. The following were elected officers for the ensuing year : President, G. A. Keyes, of Girard, Kan. ; First Vice-President, J. O. Houx, of Columbus, Kan. ; Second Vice-President, S. J. Lindsey, of Carthage, Mo. ; Secretary, James M. White, of Carthage, Mo. ; Treasurer, C. F. Wright, of Springfield, Mo. ; Executive Committee, E. Hovey, C. F. Wright and E. W. La Veine.

JAMES M. WHITE, *Secretary.*

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## THE ALABAMA DENTAL ASSOCIATION.

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THE regular annual meeting of the Alabama Dental Association was held in Selma, Ala., on July 19th, 20th and 21st. The attendance was one of the largest ever had in the State, over one hundred dentists being present. We had a very pleasant meeting, and several very interesting papers were read and discussed.

The jovial and indefatigable Mr. Selby, of New York and Philadelphia, was there, representing the S. S. White Dental Manufacturing Company. Of late no dental meeting in the South is complete without him.

The following were elected officers for the ensuing year : Dr. G. M. Rousseau, President, Montgomery ; Dr. Wm. R. McWilliams, First Vice-President, Athens ; Dr. R. N. Du Bois, Second Vice-President, Greensboro ; Dr. T. M. Allen, Secretary, Eufaula ; Dr. S. C. Wilkerson, Treasurer, Tuscaloosa.

The offices of Corresponding and Recording Secretary were consolidated. The Constitution and By-laws were revised and made to conform to those of the Southern & American Association. The Secretary was instructed to get up a complete list of all the dentists in the State, and have three hundred copies printed for the Association.

The State Board of Examiners held their first annual meeting at this time and place. The following were elected as the Board of Examiners for the next two years : Dr. E. S. Chisholm, Tucaloosa, Ala. ; Dr. Wm. R. McWilliams, Athens, Ala. ; Dr. T. M. Allen,

Eufaula, Ala.; Dr. W. D. Dunlap, Selma, Ala. : Dr. J. G. McAuley, Mobile, Ala.

The Board issued one hundred and thirty-seven permanent licenses under the new law.

After a very interesting meeting the Association adjourned, to meet in Montgomery, Ala., on the second Tuesday in April, 1882.

T. M. ALLEN, *Secretary.*

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## EDITORIAL NOTES.

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### AMERICAN DENTISTS ABROAD.

AN English dental contemporary is displeased because two American dentists, having devised certain improvements in operative and mechanical dentistry, propose to go to London and devote some time to practical teaching of these branches. The fee for the course is five pounds, and those who intend to join it are requested to send their names to a well-known London hotel. "This," says our contemporary, "is advertising certainly, and in the present century it is as perplexing as it is novel. We have well-developed special institutions; we have a scientific society which holds its head proudly among other dental societies; we have practitioners among us who from the scientific standpoint are pre-eminent, and we are not aware that our average practical skill is less reliable, though it may be less showy, than that of other nations." We have no knowledge of the two American dentists who are here referred to, nor do we know what is the nature of the advertising they have done. At the same time we are not at all ashamed that some American dentists have crossed the ocean to teach their transatlantic cousins a thing or two. The question is, how could our cosmopolitan-inclined countrymen do their teaching in any other way than that which they seem to have adopted? Could they find their way into the "well-developed special institutions," and have opportunity given them to relieve themselves of their knowledge? We trow not. The "special institutions" of England are very different to those of this country. They are more conservative, less inclined to listen to men who come with new ideas. Let the English bear in mind that Americans are not all boors. Perhaps our dentists are not "absurdly in love with professional humility" as our contemporary confesses itself to be, but for all that we see the unde-

sirableness of dentists advertising, and we venture to say that there is as little of it done in the Atlantic States as in England.

#### RETROGRADING INFLUENCES.

What influence on dentistry has the extended use of rubber plates had? Should those who desire to see a higher development in dental art rejoice at the popularity of rubber plates or not? These questions were answered in the MISCELLANY for August by Dr. G. W. Weld, and now in this issue of our journal (see page 369) Dr. J. P. Geran, of Brooklyn, has something to say on the other side. There was a very great deal in Dr. Weld's article which every conservative dentist must agree with. Concerning his championship of soft gold we say nothing, for there was one point to which his remarks tended which is of even more interest than the threadbare topic of cohesive *versus* non-cohesive gold. He asked this pertinent question, "Has the great principle which underlies the profession—namely, the saving the most teeth for the greatest number of people—been subserved?"—that is, by the introduction of such things as molded artificial teeth, hard rubber, celluloid, etc. If we admit that "the great principle which underlies the profession" is "the saving the most teeth," then with Dr. Weld we must admit that it has not been so subserved. Certainly the fact that artificial teeth can be fitted into the mouth very cheaply on rubber plates is one reason very forceful to the ignorant public why every tooth that aches or that may ache should be extracted to make room for new ones that will not ache. But Dr. Geran would, perhaps, decline to accept the saving of teeth as the "great principle which underlies the profession." He rejoices that "the poor as well as the rich can have artificial dentures."

We do not intend to enter into the controversy as to whether or not molded teeth "can be made to look as near perfect as natural ones." The chief thing we are at the present concerned about is whether or not cheap mechanical dentistry is a blessing or a curse. The conclusion which we believe most people will arrive at will be that in some cases it is one and in some the other. Where cheapness is secured regardless of quality and artistic appearance, and worst of all, where cheapness is urged as a reason for the extraction of teeth which might be saved, it is undoubtedly baneful. On the other hand, where it places within the reach of a toothless poor man a denture which he could not otherwise obtain, it is a blessing.



Those who regard the cheapening of mechanical work without the supreme aversion of, say, Dr. Weld, will join heartily in a contention that a majority of the cheap dentures are, directly or indirectly, the workers of mischief. Their existence and their possibility prompts the dentist to hold out inducements to the ignorant to have all their teeth extracted "without pain," and have a brand new set put in their place. This sort of advertising catches the eye of the masses. They too often regard a new set of teeth very much as they would a new suit of clothes. "Surely," they say, "it is better to put on a new coat, a new vest and new trousers rather than have the old ones patched." If it is so concerning clothes why not concerning teeth also? It is this disregard of the value of the natural teeth and the readiness to exchange them for molded blocks that troubles Dr. Weld. He says that these feelings are engendered by the development of cheapness in the mechanical part of the profession, and, logically enough, he argues against that cheapness—or, at least, shows how it tends to retrogression.

#### ANTI-MALLET.

Dr. T. D. Shumway has recently been starting a somewhat original idea about filling teeth. He seems to be of opinion that the use of a mallet is all wrong. He says, "If you had a tree in your garden from which the bark had been peeled you would not take a hammer and pound the fibre of the wood to restore it. We all know very well that the law of mechanics would be inoperative, except to extend the injury. Now there is no difference between the tree from which the bark has been stripped and a tooth denuded of its protective covering." And so on.

We repeat, there is some originality in the idea and in the illustration. But we fear there is not much else. The fact is, thousands of teeth have been saved for years, and they have been pounded. No one argued that the pounding itself saved the tooth, but at the same time it could not be saved without it. The filling material had to be pressed up close in the cavity, and there was no way to do it effectively but by pounding. Suppose a father loses his son and goes in search of him. He travels over rocks and stones, through thorn bushes and very rough places. He finds his boy, but only after having endured great tribulation and hardship. Now the scratches and bruises the father received did not find the boy.

or help to do so. But then he could not have been found without them. In the same way a tooth is not saved by the pounding, but it cannot be saved without it.

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## PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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IN the *Cosmos* Dr. T. D. Shumway has an article on "Dental Surgery—Not Dental Mechanics." He does not believe in a too plentiful introduction of machinery by the profession. He maintains that there is too much of the elements of mechanics in the present method of filling teeth. We cannot learn whether or not he would discard the dental engine and the conveniences of the Wilkerson chair; whether he considers the handpiece a bane, and would go back to the old-fashioned instruments. It is rather difficult to find out just exactly what the doctor is driving at. He is not sufficiently explicit. Of course there is no misunderstanding or disagreeing with him when he avers that "eclecticism or the ability to choose from differing systems is a very good thing when there are well-defined principles or methods from which to make the selection. But when this is resorted to as a makeshift it may be productive of the greatest amount of harm." That is sound enough, but then it is abstract. The dentist who has to choose between a dental engine or no dental engine takes, as a rule, the engine. Those who take hand-instruments do so generally "as a makeshift," looking forward to the time when they will purchase that which will, as they believe, help them greatly in the performance of their work. There is a danger of our seeing things through colored spectacles, and then every object on which we gaze looks to be colored. Machinery used in operative dentistry does not necessarily render an operation any the less a surgical one. An article which appears in another part of the *Cosmos*, entitled "What is the matter?" has a bearing on this question raised by Dr. Shumway. The writer (Dr. Garrett Newkirk) asks: "Which is the best filling material? Shall we have mallet or hand-pressure?" He replies: "To such questions simple answers are desired, whereas they involve problems that are not simple but complex. Everything depends on 'what is the matter.'"

The *British Journal of Dental Science* for September has an article, by Daniel Corbett, on reflex action in relation to constitu-

tional disturbance induced by second dentition. He refers to some cases which have come under his notice, and certainly they are remarkable enough to outline here. In the first, a young lady, aged fifteen, of nervo-sanguine temperament but healthy in every particular, was subject to copious lachrymation on each occasion that she left the house for out-door exercise. The eyes looked brilliant and healthy, but the moment she went into the open air the tears poured down her cheeks in a most distressing manner. Several medical men had consultations in regard to the case, but without result. Mr. Corbett was consulted, and on examination he found the cuspidati absent, though the dental arch was perfect. He removed the first bicuspid on each side, and within three months all inconvenience had passed away and the cuspidati had made their appearance. In another case, a girl gradually lost the use of her lower extremities, and also suffered from an impairment of vision. Mr. Corbett, on being called in, found the dental arch of the lower jaw complete as to number, the *dentes sapientie* only partially erupted, the circumference and superior aspect fully exposed, but still giving unmistakable evidence of severe pressure against the second molars to the extent of slight lateral displacement outwards. He extracted the second molar on each side, and in three months every iota of constitutional disturbance had passed, save one—the sight of the right eye was lost.

The *Independent Practitioner* contains the announcement that its senior editor, Dr. Harvey L. Byrd, is leaving it, "as further continuance with it would be incompatible with other duties, present and prospective." Dr. Wilkerson follows this announcement with the assurance that an editorial staff will be organized of "prominent and able gentlemen who will uphold right, truth and justice with independence." In the same journal Dr. Roger Marvin Griswold has the first instalment of an article on hereditary tendencies and transmissions. There are many interesting facts and observations in the article, but it would be more pleasing to read if the writer had put fewer words in italics.

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#### TO OUR READERS.

WE had handed to the printers a partial report of the proceedings at the Dental Section of the International Medical Congress, but owing to pressure of other matter were compelled to hold it over.—ED. J. D. M.

## A BOOK ON CREMATION.

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BY "B."

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"The Disposal of the Dead ; A Plea for Cremation." By Ed. J. Bermingham, M. D. New York : Bermingham & Co. 1881.

The question of cremation is one which has of late years been forcing itself to the front. Gradually, though perhaps slowly, it is beginning to dawn on the minds of sanitary reformers that there is something practical in it. The American when approached on the subject may point to his broad acres, and say that the smallness of territory, which is an important factor in English life, does not prevail here ; that, in short, there are millions of acres to spare on this continent in which we may go on burying our dead forever. There is something in this argument it is true, but after all it has a very weak point. The fact is patent enough that the vast prairies of the West or the deserts of Alaska are practically of no use whatever as burying places for the dead of New York or Brooklyn. Then, again, the same may be said, though perhaps with a little less force, concerning the vacant ground in New York State. Who is to pay for the transportation of the dead poor to suitable burying places from our large cities ? The poor, it must be remembered, are by far the most frequent candidates for the grave, and where are they to be buried ?

These remarks and questions are suggested to us by a perusal of Dr. Bermingham's book. We do not subscribe ourselves unreservedly as cremationists, but we have open minds. There is no doubt that open minds on this subject are possessed largely by men who have given the question more or less careful consideration. There is so much to be said in favor of the use of a crematory, and so little to be said against it, that it is only a natural and perhaps, we may say, healthy conservatism that prevents the people from all at once agreeing heart and soul with cremationists. A wide circulation of such works as this now before us will, we imagine, do much to break down the bars of prejudice.

In writing this book Dr. Bermingham begins at the beginning. He gives in his opening chapter the different methods which are in vogue for the disposal of the dead. Then he recites the evils of burial, and convinces everybody who has so neglected the matter as to have been unconvinced before, that numberless deadly dis-



eases lurk in the vicinity of graveyards to "push us to the tomb." An exhaustive history of cremation is given and reference made to the opposition to cremation which is raised by Christians who believe in the final resurrection of the body. "Science has shown that cremation merely produces quickly what putrefaction takes a long while to accomplish. . . . The objection was disposed of by Lord Shaftesbury when he asked, 'What became of the blessed martyrs?'" Surely if they are taken care of we may trust ourselves to the fire when the breath shall have all left our bodies.

One of the most interesting chapters in this book is that which gives a description of cremation and the apparatus used. We cannot in our limited space more than refer to this and following chapters. They will all repay perusal.

There is one phase of cremation which we as dentists have some little interest in. Hitherto we have congratulated ourselves on the value of our testimony in some cases of supposed murder, where a dentist's knowledge of the work he did for a person killed may be of great service to the ends of justice. Cremation will once and for ever obliterate the last chance that justice might have of tracking a crime through the medium of a denture or stomachic contents. This trouble is after all a small one, and not one that need scare anybody in his advocacy of cremation.

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### A CORRECTION.

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*To the Editor of JOHNSTON'S DENTAL MISCELLANY :*

In the August number of the MISCELLANY I notice in the Report of Proceedings of the Dental Society of the State of New York, May 11th and 12th, under the head of "Cases in Office Practice," I am made to say "buccal root of superior molar." If I did so I made a mistake, and ought to have said *palatine* root of *first* superior molar, as the pain appeared to come from that root.

This case, very peculiar in its features, still continues in the favorable condition it assumed after opening the abscess, which extended from the palatine root to the centre of the palate, but which did not develop into an abscess for several days after I first saw the case.

Very truly yours,

W. D. TENISON,

45 East Twenty-sixth street, New York City.

A FIRESIDE AMUSEMENT.

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THE occurrence of *vegetable* remains in coal is well-known, but it is generally believed that the evidences of *animal* life are slight and rarely to be discovered. According to Professor Owen this is not the case, though the remains of animal life are, for the most part, of such a nature as to be easily overlooked. He says in his "Address to the Students of the Dental Hospital of London," published in the July number of the *Journal of the British Dental Association*: "Pick up and scrutinize with your pocket lens any fresh fragments of coal that may have fallen from the shovel upon the hearthstone. If you can discern a speck of brighter color than its black environment, rub the surface showing it, flat enough to be cemented to a plate, or 'slide' of glass; then turn the opposite side to the wet-stone and carefully rub down your bit of coal till it is thin enough to let light through the speck. You may then see, in what looks at first sight like a thin plate of mere coal, when put under the microscope, a tooth, of perhaps novel form, with crown and root. The former may be defined by a coating of enamel, and the dentine may show a rich vascular organization, stained with the iron of the blood of the old carboniferous fish or batrachian." At the close of his address Professor Owen showed a number of specimens of teeth thus embedded in coal, and very beautiful objects they were when seen under a low power of the microscope.

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MYOPIA AND DEFECTIVE TEETH.

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DR. SAMUEL SEXTON, one of our leading otologists, has for the last two or three years been engaged in an investigation whose details, when given to the public in full, will prove of more than usual scientific interest and importance. Almost every general reader has heard more or less of the progressive myopia (near-sightedness) of the pupils in our public schools, able and elaborate papers on that subject having been published by Dr. Agnew, Dr. Loring, Dr. Parke Lewis, and others in this country, and by the foremost ophthalmologists of Germany and Russia. The causes to which myopia is usually attributed by the profession are the stooping posture of pupils, defective ventilation and bad lighting of

school-rooms, and lack of exercise in the open air, together with bad diet and over-study. Dr. Sexton's method of inquiry has been both more comprehensive and exact as respects the etiology of defective vision and hearing in the pupils of our public schools and seminaries of learning than those of his predecessors, and he brings in a new and special cause that has been wholly overlooked by them. Constant observation of cases led him first to the generalization that diseased and defective teeth are nearly invariable in their association with inflammatory diseases of the ear and eye, and this fact caused him to institute a thorough investigation of the state of teeth among the pupils in our public schools. In the course of this work he has taken some hundreds of accurate casts in plaster of the interior of the mouth in cases that have come under his notice, and has collected a cabinet that is invaluable as a contribution to science. His method has been, first, to take a complete cast of the internal cavity, and then from it to mold each jaw separately and unite the two posteriorly with a neat brass hinge, so that the state of the teeth, their arrangement, and all their peculiarities can be observed at a glance. He has found a pretty constant association between myopia, impaired hearing and defective teeth, the cause of which he believes to lie in the distribution of the fifth pair of nerves, which is at once a sensory, motor and trophic pair, supplying the teeth, the tissues of the nose, those of the eye and ear, the integuments of the frontal and temporal region, and so on. Irritation of the whole region is consequently produced by a defective tooth, and, in point of fact, some of the severest cases of neuralgia, temporal, facial and ophthalmic, arise from impaired teeth: often in cases where the teeth themselves give no trouble whatever, and none save the acutest medical intelligence can trace any relation between the fierce attacks in the eye, ear or temple, perhaps, and the caried tooth that gives no local trouble whatever. In a few cases progressive dementia has been arrested by immediate repair of a tooth that produced no apparent disturbance, but was responsible for deep-seated cerebral trouble; but these cases have been too few to lay stress upon them as factors in the investigation. On the other hand, troubles with the eye and ear are often traceable to defective teeth, and Dr. Sexton regards irritation of the maxillary limbs of the fifth pair as among the principal causes of the phenomena described by Dr. Agnew and Dr. Loring.—*New York Times*.

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*November*, 1881.—No. 95.

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## REMARKS UPON BONWILL'S METHOD OF RESTORING CROWNS UPON ROOTS.

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BY DR. E. A. STEBBINS,\* SHELburnE FALLS, MASS.

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EVER since the days when our forefathers cut off the "tops" of teeth, burned the "nerves" out with a red-hot iron, or rammed them back up into the roots with a pine stick and inserted crowns on wooden pivots, to the present time there have been various and varied efforts to supply the loss of natural crowns with artificial substitutes, and the "end is not yet," judging from the achievements of this progressive age.

As I am assigned the task of making some "Remarks upon Bonwill's Method of Restoring Crowns upon Roots" I suppose I may choose any one of his methods, and that will be the one published in the *Dental Cosmos*, August, 1880. The first and a very important thing to do in this particular method is to get a patient who has a root needing a crown, wants it supplied, and is willing to pay for it. I shall differ with Dr. Bonwill in some particulars. Every operator who has a mind of his own and thinks for himself will not be very likely to imitate another in every particular. Each should seek to accomplish the best results in the way he can best do it.

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\* Read before the Connecticut Valley Dental Association.



After having settled the preliminaries, my manner of procedure is to perfectly cleanse the pulp canal and fill it from the apex down about half the length with cement or Hill's Stopping ; when ready to adjust the crown, put on the rubber dam (except in some cases where the root has decayed away too far up); remove the natural crown with engine burs so far up that when the gum is allowed to resume its natural position it will cover the joint between the root and crown ; grind the porcelain crown to conform to the root, and a little shorter than will appear when done, to allow for the amalgam between it and the root ; enlarge the pulp canal sufficiently to allow for filling around the bar or pin (cutting grooves around for retainers) ; take a round platinum wire as large as admissible for the hole through the crown to be used, hammer it into a square bar, make a little head on the end, barb the corners, by trial ascertain the length required, cut off accordingly and prepare the other end the same as the one already described if for a molar or bicuspid, but if for a cuspid or incisor flatten the end a little and barb the corners ; then put bar and crown in place to see that all has been properly done ; hold the bar in place in the root and fill around with amalgam as hard as can well be perfectly impacted ; place around the bar and cover the base of the root with amalgam sufficiently soft to be compacted with the crown ; put on the crown, and with pressure and a mallet force it up into place (taking care that there is enough and not too much amalgam) ; remove all surplus mercury and amalgam that may be seen ; hold the crown firmly in place and fill the opening around the end of the bar with amalgam as hard as can be well worked.

When all is completed hold the crown firmly in place while pulling off the dam, and be sure the crown is kept perfectly in place till the amalgam is hard enough to retain its position. After a few days or hours the amalgam that is exposed, or that comes in contact with the gum, may be smoothly finished.

I have not seen, nor can I conceive of a case where any other course is justifiable than to fill the canal to the apex. A tap-hole is not only useless but likely to be of positive injury. The removal of the pulp and health of the periosteum should be attended to previous to the time of putting on the crown. The dam is useful, not only in keeping the operation dry but in protecting the gum and holding it away from the root. With a ligature around the root below the rubber the gum may be pressed and held up out of the

way by a firm and steady pull. Where the crown is broken all off, the rubber may be adjusted by use of a clamp. Care is required in burring off the end of the root, in revolving the bur from, instead of toward, the periphery. A fissure bur works very nicely for this purpose. It is better that the amalgam cover the entire end of the root rather than have the crown touch it at any point.

Hammering the wire into a square bar renders it a little stiffer, and it will be stronger than a three-cornered pin. A head on the end in the root makes it a little more secure than a tapering pin is. The head on the end in the bicuspid or molar crown should come down through, even with the grinding surface. The end in the cuspid or incisor should be flattened to correspond with the shape of the hole in the crown, and come down to the lower end of it. Pulling off the rubber has a tendency to smooth off the amalgam in the joint. Cut off no more crowns at once than can be replaced at the same sitting.

For bicuspids with two roots a large wire flattened at one end and split as far as required to go into the roots, or two small wires, may be used. For a bicuspid with one root the wire may be bent in the root a little. As the molar crowns have two holes they can be set very firmly.

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## RECOGNITION OF DENTISTRY BY THE MEDICAL PROFESSION.

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*(From our Correspondent.)*

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LONDON, *October 10th.*

WE on this side of the Atlantic watch with interest the efforts being made by you on the other side to extract comfort from the recognition of dentistry by the International Medical Congress held recently in London. We do so because, as humanitarians, we like to see everybody feel comfortable, much more our fellow-workers. I am inclined to think that the demand for the "recognition" of the medical fraternity is far greater among American than English dentists. We concern ourselves comparatively little about the matter. We do not by any means regard with indifference the concession the "medicos" have made to us, but at the same time we are not very elated over the business. We take it in the usual John Bull style, very much as a matter of course.

The reason for this is not very far to seek. A greater proportion of English dentists are doctors of medicine than of American dentists. In all new countries many doctors of medicine and other professional men will be found who have risen to their positions from the lower walks of life. The office boy, possessed with perception, aptitude and energy, has developed into the doctor with you, while with us the rule is that the medical man was born of parents who belonged to the upper or middle class of society. Here the professions, comprising the Church, the Bar and Medicine, have been very much overloaded with the first, second and third sons of rich men, or men of birth—of blue blood—who happened to be rather poor. The sharpest of these sons would be a lawyer, the next a doctor and the third a parson. That is about the order things have taken for decades. Then, added to these high-class men (many of them low in intellect and ability), there have come also a few men from the lower walks of life, who have drifted upward, or, rather, have climbed up as naturally and inevitably as the sun mounts the eastern sky. It is these latter who, as a rule, perhaps, make the most successful men.

Now, seeing the great number of accessions the medical fraternity get to their ranks of men who join them because they must do something to kill time, if for nothing else, it is easily understood that there has been a gradual side diversion of the current into the newer field of dentistry. It gradually dawned on men that dentistry ought not to be left to the peddlers and tinkers who well nigh monopolize it. The supply of men versed in medical and surgical lore willing to deal with the dentures of the people soon created a demand for their services, and the result was that it has been fashionable for some time for medical men to take their M. D. degree, and then, finding a difficulty in securing lucrative practices, go over to the dentists.

The men who have in this way joined us are still a great power in the profession. They are "medicos" first, dentists second. They exist, as I stated at the outset, in greater numbers here, compared with the number of dentists who are not M.D.'s, than in the United States. They had rights at the International Medical Congress as doctors of medicine, and they cared not for rights as dentists particularly. The editor of the *Times* is also, practically, editor of a paper called the *Mail*, issued from the *Times* office. But few people, perhaps, have ever heard of this *Mail*. If the editor were to

attend a meeting of editors—say an International Editorial Congress—he would not care if he was only recognized as the editor of the *Times*. That he was not known as the director-in-chief of the *Mail* would not bother him a bit. Just so with these dentists who are M.D.'s. They don't care very much about the "recognition" of dentistry, for they, personally, are already recognized by the medical paternity in their capacity as doctors of medicine, and not because they are dentists.

I have an idea which is *apropos* here as an illustration of one phase of the working of this question. The casting one little stone into a pond moves slightly all the water; the introduction of one good man into a community heightens the moral temperature of that community a little; the doing of one good act or one bad act has an influence which is widespread. Acts, movements, words, while the influence they may have on the community may not be violent, it is yet sure. The widespread circulation of an infidel book, while it may not be violent in its workings, while it may not convert many to its teachings, will yet leave its seeds in the public mind where they will germinate and bear fruit. Now, to apply my illustration. The medical men who are dentists are more indifferent to "recognition" than are those who are not medical men. Their indifference is contagious and spreads through all the ranks of the profession.

Let us suppose that in every one hundred American dentists there are ten who are also medical men. Let us further suppose that in every one hundred English dentists there are twenty medical men. (I take these figures at random, merely to use as an illustration. If the proportions are greater or lesser it will make no difference to the force of the illustration.) Let us suppose that the desire of the dentist, who is not a physician, to be recognized by the medical profession is represented by the figure 1. The dentist who is a physician cares nothing about it, and he is represented by 0. So the American hundred dentists would, if their desire could be collated, represent the figure of 90, while the English hundred would only represent the figure of 80. The lack of interest shown in this "recognition" by the English is thus represented by the figure 10—the difference between 80 and 90.

Sufficient has been said, I think, concerning this view of the case to show at least one reason why we are somewhat more indifferent in this matter than our "kin beyond the sea." At the same time,



many of us are rejoiced to see this question dealt with, and the late Congress has afforded an excellent excuse, if such were needed, for a discussion of the merits of the "recognition" idea.

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"OUGHT DENTISTRY TO BE REGULATED BY LEGISLATION?"—A REPLY.

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BY "B."

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THE *Cosmos* for October contains an article by Dr. William Barber in which he answers the question propounded above. Twelve pages of the *Cosmos* are taken in which to come to the conclusion that dentistry ought *not* to be regulated by legislation. The line of argument taken up by the doctor is abstruse. He has been reading Herbert Spencer (a philosopher for whom I have a great deal of respect), and some of the deductions made by Dr. Barker are professedly based on Spencer's philosophy. I fear, however, that Dr. Barker has built his theories on a sandy foundation, and that instead of taking the solid conclusions of Spencer and building straight on them, he has swerved a long way from the perpendicular.

The argument of Dr. Barker amounts practically to this: Every man has freedom to do all that he wills provided that he infringes not the freedom of any other man; consequently the dentist, quack or otherwise, has a right to practice provided that those who patronize him exercise their lawful freedom in coming to him. By doing so he breaks no just law. If a servant of the law appears on the scene and restrains him in the further exercise of his vocation, the restraint being enforced by fine and imprisonment, "the proceeding is unwarrantable and a violation of his personal rights. . . . And in the supposed case, not only has the law violated the rights 'of the dentist,' but the rights of his patrons have been likewise invaded, their freedom has been curtailed. . . . The loss and bodily harm (it may be) which the purchaser may sustain in the transaction is his punishment for ignorance, or the non-use of professional knowledge."

Then the doctor, after pointing out that legislation regulating dentistry has for its object the protection of the health of the people, goes on to say: "If it is the duty of the State to protect the health of its subjects, it is its duty to see that all the conditions of health are fulfilled by them. The legislature must enact a national

dietary ; prescribe so many meals a day for each individual," etc. Then, arguing that if the ignorant man lets a quack pull his teeth about and injure them, he must and should suffer for his ignorance, Dr. Barker says : " Unpitying as it looks, it is best to let the foolish man suffer the penalty of his foolishness—for the pain, he must bear it as best he can ; for the experience, he must treasure it up and act more rationally in future. . . . To guard ignorant men against the evils of their ignorance . . . must necessarily entail nothing but disaster."

Enough has been quoted to show the leading arguments of the doctor. Let us now come down from the dizzy heights of philosophy and look at the matter from a practical standpoint. Then we may, after that, be able to make as plausible an argument for legislation out of Herbert Spencer as Dr. Barker has against it.

Has the State any right to protect the life and health of its people? If we argue that it has, then the Doctor replies, " Then to do its work it must employ a sufficiency of duly qualified officials, empowered to direct every one's domestic arrangements." The Doctor fails to see that the State has some duty in this respect, but that that duty is limited in extent. It is the duty of a father to protect the health of a son, but that is no reason why he should always be in his presence—that he should examine every mouthful of fish he eats for fear a bone might stick in his throat and choke him. The fact that there is a limit to the father's duty does not do away with the fact that he has a duty. The same remark applies to the State as well as to the father.

Dr. Barker objects to people being guarded against their ignorance, and on this objection he rests a great deal of his argument. What would be the result if ignorant people were not guarded against the evils of their ignorance? Children are so guarded ; they are continually profiting by the experience of their elders. Why should not the people of the State also profit by the experience of those who say truthfully, " If a blacksmith performs dentistry he will do irreparable harm to his patient." The patient may have spent his life at mechanics and may have failed to study the elements of dentistry, but should he suffer all his life for his ignorance when suffering can be spared him by a paternal government?

And now a word on the more philosophical side of the question. Perhaps, after all, Spencer may be able to help us. In his " Data of Ethics," in the chapter on " Good and Bad Conduct," he says :

"Conduct is right or wrong, according as its special acts . . . do or do not further the general end of self-preservation." Now, the community, aware of the fact that the work of the quack dentist does "not further the general end" of the preservation of the people, but the reverse, concludes that the conduct of the quack is wrong. Being wrong, it must be stopped, and the community, through the Legislature, its representatives, stops it.

Then, again, in the chapter on "Evolution of Conduct," Spencer points out how mutual help and co-operation enable society to achieve its ends, and the conduct of such a mutually helpful society assumes a still higher evolution "and serves to render the lives of all more complete." Dr. Barker will admit that a higher evolution of conduct is desirable; also that that mutual help which renders lives more complete is desirable. Through the medium of the State the mechanic who makes sewing machines is partially prevented from having his teeth ruined by the forceps of the quack. In the same way throughout all the ramifications of a complicated society there is a co-operation and mutual help going on. Such laws as that regulating dentistry are indispensable in such a society as ours, though as we get more perfect and do not possess men who would prey on the ignorance of their fellows, such laws will become dead letters. To let them lapse now would be to encourage the chaotic condition out of which we have emerged.

But there is another phase to this question. In the United States we are constitutionally governed. Legislatures do not originate laws—they enact measures which a consensus of public opinion approves. The aggregation of public opinion demands that petroleum of a certain test only shall be sold. Dr. Barker would say, "We will have no such law. Let us not guard men against the evils of their ignorance. Let them buy explosive petroleum, and by it blow down their cities, and profit by the experience." On a beach where bathing is dangerous the law provides for a notice-board pointing out the danger. "To guard ignorant men against the evils of their ignorance . . . must necessarily entail nothing but disaster," calls out Dr. Barker. "They should have studied the quicksands of the coast," he might add; "if they have not, then let them bathe and drown." The law, which is the voice of the people, is kinder than the Doctor. The people are self-preservative. Because of this they make laws for their own protection, and laws which regulate dentistry are among these.

THE CASE OF GLOSSITIS IN THE "MISCELLANY" OF  
SEPTEMBER.

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BY "M."

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WHEN, as in the case recorded by Dr. Ross, of Chicopee, such a most exceptional proliferation of "mycelium" and filiform epithelium is shown, we have to expect a co-accumulation of the different conditions which promote the collecting of the epithelial shreds on the surface of the tongue. The formation of epithelium in a healthy condition of all the parts concerned keeps exactly step with its wearing off; let either the epithelium be produced in abnormally great quantity or worn off in too small a proportion and it will accumulate. Slight degrees of a disturbance of equilibrium produce most cases of a coated tongue. The causes of an excess of formation of epithelium are less understood than those of a deficiency in wearing it off. The chief factor in wearing off the epithelium is the process of mastication, especially of hard, crusty substances. We file it off and swallow it with our food.

In Dr. Ross' case there was certainly deficiency in mastication. The lady did not have any tooth, and, besides, had glossitis which alone would prevent thorough mastication; hence the epithelium was not removed at all by this process. The peculiar shape of the layer shows plainly the effect of such abrasions. Wherever the tongue came in contact with gums or the palate there the epithelium was worn off in normal degree, but where the tongue only touched the soft palate or only gently the roof of the mouth there the epithelial layer could accumulate. This very same spot is distinguishable in the most healthy mouth by a more whitish coating of the tongue and longer papillæ. The brown color is due partly to particles of meat, etc., remaining between the elongated papillæ, partly probably to small extravasations of blood accompanying every chronic inflammation. That we have really a case of chronic glossitis (not glossitis dissecans, but glossitis simplex) is shown by the fact that "at intervals during ten months the tongue would be quite sore and swollen."

That the ether was the stimulant which started the glossitis seems pretty evident, though the reason why a sub-acute instead of, as it is more commonly the case, an acute glossitis followed is not quite plain; probably the old age and diseased condition of the mouth



are the chief determining causes. The growth interfered with the taste ; this is a necessary consequence of the fact that the circumvallate papillæ, the chief seat of the sense of taste, were covered one-fourth of an inch deep with an almost impermeable felt of epithelial cells, old food, etc. But hypertrophy was present besides.

We have so many analogous cases of chronic inflammation resulting in hypertrophy that we should almost expect it in this one. In chronic coryza the mucous membrane of the nose swells ; in psoriasis the skin, in chronic bronchitis the bronchial mucous membrane becomes hypertrophied, etc. To increase the number of conditions favorable to the accumulation of epithelium in our case we may add that the lady was troubled with "inability to retain but very little food upon the stomach," so that probably she ate but little.

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## TWENTY-FIRST ANNUAL SESSION OF THE AMERICAN DENTAL ASSOCIATION.

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HELD AT IRVING HALL, NEW YORK CITY, JULY 12TH, 13TH, 14TH AND 15TH, 1881.

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*(Continued from October Number.)*

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### SECOND DAY—AFTERNOON SESSION.

AT 2.30 P. M. the PRESIDENT called the meeting to order.

### REPORT OF THE DENTAL DIRECTORY.

Dr. D. C. McNAUGHTON, of New Jersey, Chairman of the Committee on Dental Directory, presented the following report, and moved that it be accepted :

MR. PRESIDENT AND MEMBERS OF THE AMERICAN DENTAL ASSOCIATION—*Gentlemen* : On account of the large number of persons composing the Committee on Dental Directory I find it impracticable to have a meeting of the committee, therefore I ask leave to report as its Chairman. Within the last year I have received printed lists from the following States : Mississippi, Connecticut, Tennessee, Massachusetts and a written list from Minnesota by Dr. D. C. Price. Copies have been made of the printed lists and distributed to the several members of the committee. The work of making copies of the written list sent to me is so great that I decline to do it in the future. In order to increase the value of the work to the profession, I offer the following recommendations :

First, that the names of Dental Colleges, with the name and address of the Dean, be published in the Directory of the State where situated. Second, that the names of dental societies, with the names and addresses of their officers, be added to the list. Third, that the names of dental journals and the addresses of editors be added to the list. Fourth, that the names and addresses of dealers in goods pertaining to dentistry be added. In order to facilitate the work the following is offered : That hereafter the list of the different States be exchanged directly without the formality of passing them through the hands of the Chairman, as there has been no stated form for the work when completed ; that the State charge the uniform rate of one cent per name, and the same for correction when sold to dealers and manufacturers. Some of the members of the committee have failed to respond in any manner to the call of the Chairman, others have responded, refusing to interest themselves in the work. In order, therefore, to have gentlemen on the committee who are in harmony with the work, I recommend that the Chairman of Committee on Directory has power to declare and fill vacancies.

Dr. CROUSE moved the adoption of the report. After some discussion the motion was agreed to.

#### ANATOMY, PHYSIOLOGY, HISTOLOGY, MICROSCOPY AND ETIOLOGY.

Dr. W. C. BARRETT, Chairman of the section, said the Secretary of the section was absent. They proposed to do nothing but give a summary of the work done on the previous day, which they had endeavored to get into as good shape as possible.

Dr. NILES, of Boston, read a paper on "Reflex Action and Shock." After stating the growing interest in the subject of the part played by reflex action in physiological and pathological phenomena, and noting the general paucity of authoritative information to be found in the text-books, or to be obtained from the teachings of the schools, the essayist defined reflex action as a term to be applied commonly in connection with a generation of nerve-force independent of the will. In the physiological point of view the generation of nerve-force is derived from four sources : First, the will, the highest form of nerve-force. Second, the higher reflex centers, embracing the whole cerebral spinal axis. Muscular movement, after the head is severed from the trunk, is independent of sensation and volition, and thereby purely reflex. Reflex movements.

stimulated from the cerebro-spinal axis, are so intimately associated with the will as to be not readily distinguished from voluntary motion. Thus, the man who fluently addresses an audience is employed with the thought of his subject, while the muscles of speech and articulation are presided over for the most part by lower centers. Those movements which may be either reflex or voluntary are mainly governed by nerve-centers situated in the cerebro-spinal axis. Lower in the scale of nervous action we have the third source of nerve-force, what may be called the purely reflex system, commonly known as the sympathetic. Its office is to preside over the functions of circulation, secretion, excretion, growth and repair. It is not yet conclusively proved that there exists a system of nerves called by Marshall Hall excitator-nutrient and excitator-secretory, or trophic nerves, which directly preside over the nutrition of a part. Still lower in the scale of animal life is found the fourth source of nerve-force—automatic action—which has more or less local influence over the organ in which it is situated. While the four sources of nerve-force named are in some respects independent of each other, their fibres are so intimately associated with each other that it is hardly possible to stimulate one to excess without exciting some of the others. In view of the intimate association of the parts of the oral cavity with the cerebro-spinal centres, the practical conclusions are obvious in connection with our specialty.

Considering the question of shock in dental practice, the essayist contended for the utmost gentleness in the treatment of patients, arguing from the fact as stated, that no one would doubt that there is a degree of exhaustion on the part of the patient after nearly every operation, varying according to susceptibility, time occupied, and amount of pain endured. In his opinion, the sight of our best cast-iron chairs, various smells about the office, the dental engine, with heavy hand-piece—precluding delicacy of touch—engine or electric pluggers, with their accompaniments, etc., were to be reckoned as sources of this exhaustion or shock. The more delicate and flexible the excavator, or instrument, the more gentle will be its contact when we touch a tooth. "Cold steel" imparts a disagreeable sensation in proportion to the amount of metal in the instrument. He therefore believed the old way of making excavators and pluggers with wooden handles was more in keeping with the gentle and kind treatment which patients should receive.

Dr. C. F. W. BÜDECKER, New York, read a paper on "The Present

Status of Dental Histology," in which he sketched briefly the history of the cell doctrine from its promulgation by Schwann, in 1839, giving an account of the modifications proposed by Virchow, Max Schultze, Beale and others, down to 1872, at which time the accepted theory of histology was as follows: The animal body is composed of minute cells, which are built up by a structureless, mostly nucleated, protoplasm; the cells being either suspended in a liquid (the plasma of blood, lymph, saliva, etc.) or inclosed in a jelly-like intercellular substance; direct communication between the cells existing only in the myxomatous tissue; the muscles and nerves being regarded as derivatives of the cells.

In 1873 Carl Heitzmann established a new theory, which has been named the "bioplason" doctrine. The bioplason doctrine considers the animal body not as a mere agglomeration of individual cells, but as one continuous mass of living matter, having closed spaces more or less occupied by liquids (the blood, lymph, etc.).

Heitzmann discovered a reticular structure in the protoplasm, and described the nucleus, the granules, the uniting threads, and the inclosing layer, as the living matter proper, which is alone endowed with the capacity of motion and growth. The liquid held within the meshes of the reticulum he declared void of life. According to this theory the elementary form of living matter is a homogeneous, apparently structureless granule, of which hundreds may sometimes be seen in the small lump of protoplasm formerly denominated a cell. Heitzmann further discovered that all the tissues of the body, and the formerly so-called cells, are connected with each other, either directly by broader offshoots, or indirectly by a delicate reticulum of the living matter, traversing the basis-substance. Isolated lumps of protoplasm are not met with, except in the liquids of the body, as blood, lymph, etc., which are not regarded as tissues. The presence of the reticular structure in protoplasm is now accepted by most of the leading histologists of the day.

Applying the bioplason doctrine to the teeth, the essayist claimed that by no other theory can the various stages of an inflammatory process, such as caries is now recognized to be, be more clearly described, and stated his conviction that as long as the old cell doctrine is adhered to the various physiological and pathological changes of the dental tissues cannot be realized. He also recapitulated the results of his own studies of the dental tissues under the direction



of Professor Heitzmann, which are in full harmony with the bioplasm doctrine.

Cementum is identical in structure with bone, containing protoplasmic bodies within the lacunæ, offshoots of living matter in the canaliculi, and an extremely minute reticulum traversing the basis-substance. The canaliculi of the dentine, as a rule, are bifurcated only on the boundaries toward the enamel and cementum. Each canaliculus contains a central, slightly-beaded fibre of living protoplasm, which is set with delicate conical thorns. The basis-substance is pierced by a delicate reticulum which connects all the dentinal canaliculi indirectly with each other, and which evidently contains living matter. In the enamel are seen fibres of living matter like those of the dentine, except that they are smaller. These lie in the interstices between the enamel rods, and upon their periphery the same thorn-like projections are seen. The enamel rods themselves show an extremely delicate net-work. In the pulp all protoplasmic bodies of the periphery as well as those imbedded in the myxomatous basis-substance, are united with each other, either directly by larger offshoots, or indirectly by filaments through the basis-substance. Thus it will be seen that all formations of living matter, of the dentine, enamel, and cementum, and of the pulp, are uninterruptedly connected with each other; then by the surrounding pericementum with the bony socket, and thence with the whole body. Hence, a tooth is composed of a series of wonderfully complicated living tissues, being a constituent part of the animal body, and is neither a compound lump of isolated cells nor a dead mass of lime-salts.

Dr. FRANK ABBOTT said that he had for the past two years been unable to attend the meetings of the organization, and he had done nothing to assist in the section to which he had been appointed. He would, however, give some of his views in reference to the caries of human teeth. Some three or four years ago Dr. Bödecker and himself had bound themselves to ascertain the correct and definite anatomy of the human teeth and that which pertained to their destruction, Dr. Bödecker taking the structure of the teeth and he (Dr. Abbott) that of dental caries. They had published their result in the *Dental Cosmos*. It was, in the first place, quite desirable that they should fully understand, if possible, the anatomy of the teeth to start with, so he would trouble them for a few moments while making a rough sketch

upon the board of the tooth. [Proceeds to do so.] Pointing to an illustration of caries of enamel on the board, he said all the living matter in every direction is connected, so that whenever one part is affected all of the tooth is more or less affected, because the life extends everywhere. He did not think his statement would be contradicted that decay always begins with the dissolving out of the lime salts of the enamel by the chemical action of some acid. Every tooth in a normal condition is free from decay, and it will not decay so long as it is kept in a state of perfect cleanliness. The enamel of the tooth is composed of 96 $\frac{1}{2}$  parts of inorganic (principally lime salts) and 3 $\frac{1}{2}$  parts of organic matter. The illustration looks as though, while the continuity of the boundary was preserved, pieces of the surface had dropped in, having lost their supports. At the bottom the structure is nearly normal, only a little of the lime salts being dissolved out; higher up it is more granular, and a step further and we come to the cavity of decay. We have here a return of the enamel to medullary or indifferent tissue. As soon as the lime salts begin to be dissolved out, an inflammatory reaction is set up which reduces the tissue to its original condition. As it progresses from the surface, we find the whole structure broken down, little by little, through the enamel to the dentine and possibly to the ultimate destruction of the tooth, unless its course is checked. Decay occurs either as chronic or acute. In chronic decay we have a different condition from that which characterizes the acute form. His observations showed that decay assumes an acute or a chronic form, according to the perfect or imperfect calcification of the tooth. When the periphery of dentine is but little changed, and a narrow zone of yellowish color forms the boundary toward irregular shallow excavations, sometimes with various-shaped elongations passing down into the dentine, it is called chronic caries, because of the slow course it runs. Low vegetable organisms are never seen in the substance of a decayed tooth. They may accompany it, but not as an exciting cause. If the pulp be dead there is no reparation. The acids go on to the destruction of the tooth, assisted only by putrefaction of its organic portion. Meat decaying gives as one of the products lactic acid, which is an active agent in the destruction of tooth-substance.

In acute caries we have deeper elongations into the substance of the dentine, mainly in the shape of fissures running independent of the direction of the dentinal canaliculi—frequently across them.

Sometimes these fissures seem completely isolated, but the probabilities are that they are connected in some way with the mass of decay. Sometimes the connection is by means of tracts of partially broken-down dentine. Viewed with a low power, say 250 diameters, the fissures seem to be filled with a granular mass, the remains of the former tissue. With a power of 1,000 diameters we find that at a certain distance from the cavity the dentinal canaliculi look unchanged, and each contains the central transverse section of the dentinal fibre with its delicate offshoots. Approaching the cavity, the canaliculi become enlarged, and are filled with yellow protoplasm, in which is seen the net-like arrangement of the living matter. Still nearer the cavity the canaliculi are enlarged to many times their original size, sometimes several running together, forming a confluent cavity, and the basis-substance entirely disappears and only indifferently formed protoplasmic bodies are visible. If a cavity in which acute caries has been at work is properly sealed up, recalcification will occur, but the dentine will be of a widely different character from the original formation. The meaning of the enlarged canaliculi was that the lime salts had been melted down by inflammation. If the inflammation which produced it were taken away, probably recalcification would take place.

In caries of cement we have exhibited, first, all the phenomena known to be present in the early stages of inflammation of bone. Cement is almost identical with bone, having the same structure. If cement were subjected to the same conditions as enamel and dentine, its decay would be much more rapid, as evidence of which we all know how soon we have little holes all around the necks of teeth after recession of the gum, and food debris lodges and ferments there. Decay in cement is in its essential features analogous to caries of dentine when in a live condition; in other words, it is an inflammatory process. On the boundaries of the caries we see, besides unchanged cement corpuscles, those which have been enlarged and transformed into medullary or inflammatory elements.

Down to 1831, he believed it was, all writers spoke of decay of the teeth as inflammation. Magitot, in 1868, stated that it is due altogether to a chemical process. Leber and Rottenstein claim that the leptothrix crawl into the canaliculi and enlarge them, so that the destructive agency can follow. He (Dr. Abbott) never saw such a thing as vegetable organism assisting the progress of decay.

Even Tomes states that the process is simply a dissolving out of the lime-salts, treating the tooth the same as Magitot.

Dr. J. B. Davenport read a paper on the "Etiology of Chemical Abrasion," which we shall give next month.

The meeting then adjourned.

#### EVENING SESSION.

Dr. BARRETT, of Buffalo, said that last year he read to the Association a paper upon anæsthetics, and he then said that he would continue the subject. He never worked harder in experimenting and study than during the past year. He had made 173 vivisections in a new line of the study of anæsthetics. He had endeavored to regulate and catalogue them so as to make them worthy of attention at that meeting. He did his very best to have something to present to them and wrote a paper of thirty pages, but on looking it over he found it was not worthy to be put before them. It was with humiliation he said it, for he had written to members of the sections, stating that he would take care to have something ready, but he had again only to confess his ability to fulfil his obligations. He would, however, say a word upon the physiology of nitrous-oxide gas. It was used more extensively than any other anæsthetic. It was, indeed, used by quacks all over the country, and they were ignorant of the physiology of anæsthetics. Yet, notwithstanding the fact that it was used by practitioners who were ignorant of the physiology of anæsthetics, it had proved itself to be the most successful anæsthetic they had. The death rate from its use was the lowest of all the anæsthetics used. There were a number of theories put forward to account for narcosis produced by anæsthetic agents (he was speaking especially of nitrous-oxide gas). One was that it was due to the want of oxygen. It was needless for him to go over that ground. The want of oxygen to account for it was entirely incorrect. Its action was no more like asphyxia than that of chloroform or ether. The anæsthesia produced by nitrous oxide was as complete and absolute as any other agent. The real reason of its safety was not its want of potentiality but because it was quickly eliminated from the system owing to its gaseous form, unlike other anæsthetics. Statistics showed that nitrous oxide had only one death in one hundred thousand, only three deaths being recorded out of three hundred thousand applications of this gas. This anæsthetic affected not the



nerve centers first but the periphery of the nerve. To produce narcosis from nitrous oxide the air should be excluded entirely. He had proposed to perform a few experiments before the society, and if the meeting were held in a different place from New York he would still attempt to perform them. They had, however, in New York one, Henry Bergh, who stood in the way of the advancement of scientific knowledge, and he (Dr. Barrett) found it impossible to establish physiological truths unless there were experiments upon the lower animals. He did not think that the animals in these experiments ever suffered any pain. He had made one or two experiments upon pigeons. The first time he compared the effect of carbolic acid and nitrous oxide upon pigeons there was a scientific gentleman present. The pigeon lived in carbolic acid six minutes; in the nitrous oxide only three or four minutes. The gentleman was astonished and said he should go over his chemistry and physiology again. But the truth of it was that one experiment did not prove a fact. They should go over an experiment again and again before they could get a final result. In these experiments he had not endeavored to prove any theory his own, but at present he could only say he had done his best.

Dr. BUCKINGHAM wished to know if this anæsthesia had any particular effect upon any particular organs of these animals.

Dr. BARRETT said he had never found that any special organs seemed to suffer, although he had kept the animals under its influence for a long time. He found no organ to suffer except the brain. Any danger that would arise, he thought, would arise from the blood pressure upon the brain. If one were to die from the nitrous-oxide they would die from the symptoms due to apoplexy, caused by the flow of blood to the brain. He did think he had noticed a tendency in that direction. He had kept a pigeon in a surgical operation under its influence for over thirty minutes. In experiments upon dogs he got similar results; but it was difficult to give dogs nitrous-oxide. He found out afterwards the reason of that. A dog's mouth extended further than the mouth of a human being, so that the corner of the mouth was nearer the eye. In giving nitrous-oxide his plan was to attach a mouth-piece to the valve, and while he was watching certain symptoms he trusted to the assistant to hold it over the dog. Three or four times the dog would appear to be anæsthetised, but come to again. The cause of that was the dog had got a small opening in his mouth. Any one performing these

experiments had to be extremely careful, as it was often impossible to shut off entirely the supply of air.

#### REFLEX ACTION.

Dr. NILES' paper on Reflex Action was next taken up for discussion.

Dr. ATKINSON said he had never seen any definition of reflex action that was satisfactory to him. There was a field nearly unexplored that should be covered before they thoroughly understood the importance of that question. They said they understood the nervous system, yet they all had different ideas about it. Would anyone define what irritation was? He had never himself heard reflex action accounted for by anyone. He had read of it in many books, but he had never read anything satisfactory upon it.

Dr. BARRETT thought in discussing reflex action, or nervous force, or nervous action, it seemed to him necessary that they should have some starting point. They should see what nervous force was, and then attempt to follow the subject out, and, if possible, attempt to discover the laws which govern it. Then they would have to go back to the origin of force—that mysterious thing they called force—the force of nature, light, electricity, etc. Light, heat and electricity were the result of certain molecular changes which were constantly going on. He believed that nervous force was identical with the other forces—that all force was a unit. Molecular changes were going on in the human body continually. Before they could understand what reflex action was they must also understand what nervous action was, and what nervous impulse was, and they should try to solve the question of nervous force. It was amply exemplified that the nervous forces did not differ from the other forces to any great extent.

Dr. BUCKINGHAM, of Philadelphia, did not know he could throw any light upon that subject. It was the theory that all these forces were motion. They could not perceive motion originating in itself. There should be some cause to produce the motion. What was the cause? Where did it come from? How did it come? They could not explain motion where there was nothing. To get the motion of light they had to conceive that there was such a thing as atmosphere. Let them take the account of light given in the creation of the world. God said let there be light and there was light. There were certain things they could never understand.

The subject then passed and the meeting adjourned.

*(To be continued.)*

DENTAL ASSOCIATION OF THE UNITED STATES  
OF AMERICA.

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SECOND ANNUAL MEETING, HELD AT REPUBLICAN HALL, NEW  
YORK CITY, AUGUST 8TH AND 9TH, 1881.

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*(Continued from October number.)*

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Dr. M. L. RHEIN next read the following paper on Dental Education :

It is a melancholy though generally conceded fact that the present position of the dentist is very equivocal. The better class of dentists claim that they are practicing a specialty in medicine, while many medical men decline to recognize them except they are graduates of a regular medical college, ignoring the diplomas granted by dental institutions unless backed by a medical degree.

The medical profession have become satisfied that specialists are a necessity ; that the human organism is altogether too complex to be perfectly studied by any one person, and that the science at large can only be perfected by those who devote themselves to the study and treatment of special diseases or organs.

It is true that within the last few years the increased knowledge of the histology of the teeth, the diseases to which they are subject, and their relations to the system at large, have forced the medical profession to give at least a passing notice to dentistry. The teeth are as much a part of the human organism as the eyes or the ears. Yet, while it would be considered absurd for any one to attempt to practice ophthalmology or otology without having previously completed a medical course, thousands are irremediably injured by persons practicing dentistry, openly and in full compliance with law, without a particle of knowledge of anatomy and physiology. It follows that it is the duty of the medical profession to recognize dentistry as a branch of medical practice. A glance, however, at the history of dentistry will show that the so-called independent spirit of the dentist has in a great measure contributed to alienation from his brethren in the healing art. Dental colleges all over the country have graduated dentists and conferred degrees of doctor in dental surgery without requiring a complete medical and surgical education. That such a course is radically wrong is apparent, and while it is continued the medical profession will very

properly refuse professional recognition to a person possessing only such a degree.

Dentists study certain branches which are either wholly overlooked or only imperfectly taught in the regular medical schools; on the other hand, many medical branches of equal importance to the dental practitioner, are not included in the curriculum of our dental schools.

It is absolutely necessary, in order to properly comprehend the relations which the teeth bear to the rest of the system, to understand the delicate organization which controls every part of the human frame. From the very inception of the human being, dentition plays an important role in the animal economy. The troubles arising from the oral cavity are by no means confined to childhood and youth. It is but proper that a dentist should acquire sufficient knowledge to enable him to make a correct diagnosis of tumors, abscesses, and various types of neuralgia, dyspepsia, etc., all of which he is likely to meet with at every stage of his professional career. Surely the lack of such knowledge will but make quackery rampant, for who of us is willing to acknowledge his ignorance in matters so closely connected with his practice?

We are, as I before stated, becoming more closely assimilated to our medical brethren every day, and it is our duty to hasten the period of our advancement as much as possible. The obstacles which stand in the way have already been referred to. They are: Firstly, the fact that students of dentistry are not taught enough of medicine, and that dental colleges can confer only a partial degree. Secondly, that students of medicine devote absolutely no time to the proper study of the teeth. Thirdly, that practitioners of dentistry and of general medicine have each failed to recognize the importance of the other's knowledge.

Students desiring to practice dentistry as a specialty should acquire a thorough knowledge of the science of medicine and surgery preparatory to entering a dental college, and then pursue the study of practical dentistry, and its allied branches, to completion. Nor is the day far distant when one of the necessary qualifications for admission to any reputable dental college will be that the applicant must be a graduate in medicine. Such an assertion may seem folly in the eyes of many practicing dentists, but we can only expect an important step like this to be taken after mature consideration; but taken it must be, sooner or later. The recent and constant improve-



ments in the curriculum of our dental colleges, among them the recommendation that students shall spend a third term at a medical college, for the purpose of acquiring the degree of doctor in medicine, are steps in the right direction, and point to the ultimate accomplishment of the desired result. This plan is like attempting to build a house before the foundation is laid. When the change I have indicated is adopted, the benefits will accrue not only to the patient but also to the conscientious practitioner. Then will the dentist be prepared to meet the emergencies which now frequently perplex him; nor will he be restricted to the mere saving of teeth, but he may enter the broader fields of oral surgery.

It is frequently asserted that it is not necessary for practitioners in medicine to devote any attention to the teeth. That this is an error is shown by the fact, that prior to Sir Charles Bell's investigations the sensibility of the face was supposed to be presided over by the facial nerve, which was believed to be the seat of the painful disease, *tic douloureux*. Division of this nerve was frequently practiced, resulting only in paralysis of the side of the face operated upon. It is now, however, well known that the trigeminal or fifth pair of nerves is involved in this affection. Physicians frequently treat patients suffering from neuralgia without satisfactory results, when treating an exposed pulp, or extracting an offending tooth, is all that would be necessary to relieve the excruciating sufferings of the patient.

Disease of the dental tissues frequently gives rise to constitutional troubles, and most of the affections of the oral cavity have more or less connection with the teeth. But little reflection is needed to convince the enlightened physician how much more efficiently these could be met and overcome if the medical practitioner possessed even a rudimentary knowledge of the teeth. An elementary study of the anatomy, physiology and pathology of the eye and ear is an essential part of every medical course; and it is an accepted fact that the student who intends to make a specialty of the treatment of these organs must pursue his studies beyond those of the general practitioner. These studies are, however, required for the information of the latter class on account of the relation which these organs bear to the rest of the human frame, and not to oblige him to treat such diseases, as the general practitioner invariably hands over such cases to the specialist. Why, then, should not the elementary principles of dentistry be introduced into and

made a part of a medical education, and *vice versa*, a general knowledge of medicine and surgery made a necessary pre-requisite to graduation from a dental college?

It is a duty which the medical colleges owe to suffering humanity to recognize the importance of giving their graduates a broader comprehension of dental matters. It is the duty of the State, by means of stringent though equitable enactments, wisely administered, to prevent any but those duly qualified from practicing this specialty in medicine, as indeed has been done by the Legislatures of many of the States during the past few years. It is the duty of the dentist to prove, by sincere and earnest study, his desire and ability to take that place in the medical profession which, eventually, he will occupy with credit to himself and benefit to humanity.

Dr. WINDER said he should like to compliment his young friend. They could never unite the two professions, as they were as distinct and separate as they possibly could be. They were founded upon different fundamental stones. Where was dentistry included at all in the medical curriculum where the degree of M.D. was given? If they spoke of dentistry as a specialty of the whole healing art it was certainly that. He believed always the most rapid progress would take place where people minded their own business. He was a medical graduate himself. He studied medicine before he studied dentistry. In the early history of their profession when Dr. Harris, whom they all revered, wanted to raise dentistry from a mere trade he appealed to several medical schools in Baltimore and Philadelphia, and they refused to touch the matter. Medicine itself was on the verge of breaking up into specialties; virtually it had done that.

Besides anatomy, physiology and chemistry they required in dentistry mechanics and artistic taste. So much so was that the case that the medical school which was about to be established by the Johns Hopkins University of Baltimore, after consultation with the best men, decided that it would first require of its medical students graduation in anatomy, physiology and chemistry. Professor Huxley said that medicine had failed to progress simply because it had undertaken too much. The fundamental stones on which dentistry and medicine were built were anatomy, physiology and chemistry. Dentistry, however, had the other two stones—artistic taste and mechanical skill.

Dr. R. F. HUNT was very glad to see their friend Dr. Rhein read a paper upon that subject. There was not a gentleman within

sound of his voice, or indeed a member of the dental profession, who was not deeply impressed with the feeling that gave rise to papers on that subject, and to the discussions which followed. The general feeling was in favor of a more thorough education being given in the dental profession. Some said that they should take a medical education as the foundation for a dental education. Others went so far as to say that the dental profession should be wiped out entirely, and have only the medical profession. That was impracticable. The medical colleges should give a dental education. He, after long consideration of the subject, took the position that they wanted a more thorough education of the dental graduates, but the way to secure that was not to give a medical education separately and then a dental education separately. There was not a dental college that did not profess to give a medical education, to a certain extent, to its graduates, in order that they might treat the oral cavities in a constitutional way. They professed to do that, but whether they did it or not was quite a different thing. His plan was not to go outside of their dental colleges for education. Let them enlarge the curriculum of the dental colleges so as to fit their graduates for any emergency they might be called upon to meet. He thought, looking back upon the history of their profession during its comparative short existence, they should be proud of it, and should try to elevate it and bring the attainments of its members up to the highest grade and standard.

Dr. J. G. AMBLER felt it was incumbent upon him not to let these papers pass without making some remarks. He congratulated the profession upon the paper read by Dr. Odell, and he congratulated Dr. Odell upon having the mind to produce it. He had certainly laid the foundation of an important work, and he would make it a very important one to them at their next meeting. He (Dr. Ambler) heartily endorsed its sentiments. Dr. Rhein had told them in plain, simple terms that education was a necessity. The method of obtaining that education was left (wisely, he thought) open for discussion or consideration. Education was the thing to be obtained, it mattered not so much how it was obtained so long as it was acquired. It would be well, if the circumstances would permit, if the student, in commencing his studies in dentistry, could commence at the medical college, and then go through the dentist's college. He agreed with Dr. Hunt fully that if it were practicable the dental colleges of themselves should be so comprehensive as to

provide all that was necessary for the dentists to know. He hoped they might become so. The idea that a dentist must of necessity be a medical practitioner he thought was a fallacious one. If he understood enough of medicine to render him competent to perform all the operations necessary for his branch or specialty that was all that was required of him. A dentist should get all the outside information he could as supports to the position he occupied. They ought to congratulate themselves, the whole members of the profession, on the opportunities those desiring to be dentists had at the present day, when those older in the profession remembered the rough road they had to travel. The facilities for dental education now were great and were becoming greater every day.

Dr. RHEIN, in reference to the remarks that the dental colleges should supply the education necessary—medicine as well as dentistry—said he had the pleasure to attend the dental department of the University of Pennsylvania. There the students had all the facilities they wanted to study medicine, but they were, as a rule, devoting their attention to the practical part of their profession. From his experience there he came to the conclusion that the only way to give dentists a medical education was to send them to a medical college first.

Dr. J. R. WALKER, of New Orleans, said, the fact was that in their medical colleges the oral cavity had been neglected, *per se*. The dental colleges should be able to give their students an education that would cover all the ground that was required.

The subject was then passed.

Some remarks were then made by Drs. HUNT and ODELL concerning the work of the Association and its alleged attempts to "knock out of existence" some other Association. That any such desire existed on the part of its members was denied *in toto*.

The meeting then adjourned.

*(To be continued.)*

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ALABAMA DENTISTS.—We have received a copy of a directory of the practising dentists in the State of Alabama, compiled for the Alabama Dental Association by Dr. T. M. Allen, of Eufaula, Ala. In it appears a list of licensed and unlicensed dentists, with a list of members of the Alabama Dental Association. An appendix of dentists living in other States and practising in Alabama is also given. The work shows some little enterprise on the part of the Society and painstaking energy on the part of Dr. Allen.



## THE INTERNATIONAL MEDICAL CONGRESS.

As our readers are aware from notices which have appeared in the MISCELLANY, Section XII. of the International Congress, held in London in August last, was devoted to dentistry. Herewith we give an abstract of a paper read before that Section on August 5th, by John Tomes, F. R. S., L. D. S. E., etc., M. R. C. S., England :

## THE STUDY OF DENTAL SURGERY AND THE MEANS THERETO.

Dental surgery has within the present century, by the full consent both of the medical and general public, developed into a well-defined specialty. The medical practitioner refers all dental cases to a dentist where one is at hand, and the general public select him as the fittest to help them in all cases of dental trouble. No apology, therefore, need be offered for the separate practice of dental surgery, neither need arguments be put forward in support of its continuance as a distinct branch of surgical practice. The necessities of society on the one hand and the technical requirements of the dentist on the other hand, have determined the condition of separateness. But this great international meeting affords a fitting occasion to enquire how the accepted condition can for the future be met, so that the public may be best served, for therein rests the sole cause for our presence, either as special or, indeed, as any kind of practitioners whatever.

Utility alone is the excuse for the dentist's existence, and the full recognition of this fact brings us to the question of how and by what available means he can become most useful? How he can best fulfil the trust imposed on him as a specialist, bearing in mind that on account of his supposed superior special knowledge he is consulted, and thus assents to the belief that the dentist is far more capable than the general surgeon in the treatment of dental ailments. Clearly his honor—nay, even his integrity—is pledged to render himself in the highest degree capable of discharging to the fullest the freely-accepted duties. In admitting the social necessity for the presence of the special practitioner, the need for his special education is conceded, and it is to the wide question of what should be the education of the dental practitioner, for the determination and the development of which, we, as practitioners and teachers, are responsible, that I would call the attention of the meeting.

Before proceeding further, however, let me state that I wish it to be understood that all I have to say upon the subject of dental edu-

cation applies only to those who have yet to be educated, and to those who possess neither unusual fitness nor unfitness for the pursuit of dental studies. And furthermore, I desire to state that any opinions I may express as to what can and should be done are intended to apply only to education in England. It will be for the representatives of other nationalities to tell us what system of education is most applicable and suitable in their respective countries.

In the first and second decades of the present century dental practitioners were few in number, and for the most part, but not in all cases, members of the medical profession, who at the onset of practice had but a slender knowledge of the duties of the dental surgeon even as they were then understood, or at best they had such an amount of knowledge only as the accident of a good or bad private instructor might impart, in all constructive matters depending from the first upon the assistance of dental mechanists. Other persons commenced their career as young men or boys in the laboratory of a dental practitioner, acquiring therein in the course of an apprenticeship extending over five or even seven years, great manual skill, but whose claim to surgical knowledge at the expiration of pupillage could not be sustained. Yet from this class of persons some of the most distinguished practitioners of the last generation were derived. The one spent those years, when to learn is easy and authority in the teacher is effective, in the acquisition of manual skill; the other in the acquisition of medical, I will not say surgical knowledge, in the strict meaning of the term surgical. Hence it was that practice was approached from two wholly different sides, and resulted in the production of practitioners of two distinct classes; one competent to advise, the other competent to treat, but neither fully competent both to say what should be done and to do it effectively.

Toward the end of the second decade dentists began to increase in number, and each year up to the middle of the century brought new candidates for practice, the vast majority of whom came directly from the dental laboratory, and were, for the most part, inferior in general education to the surgeon, in whose medical knowledge they had no share. Out of this educational difference arose an interprofessional division, not to say jealousy, in which society took but little interest, each person selecting for himself a practitioner from whom he hoped to secure all the advantages that treatment could effect, and the choice as often fell upon the unqualified as upon the

surgically qualified practitioner. Among the more intelligent practitioners it came to be freely admitted that dental education, from its one-sided character, was in a very unsatisfactory condition; and after some few years of discussion the opinion was generally accepted that the general and special portion of the dental training should go on simultaneously; so that both manipulative skill and surgical knowledge should be acquired in the days of our youth, when the power to acquire is at its best, and at the only time, indeed, when a high degree of manipulative skill can be acquired.

But we were not the first to recognize the necessity of a systematic dental education. Our American brothers had not only felt but provided for the need in the organization of dental colleges; and we, in following in their footsteps and profiting by their experience, accepted an obligation which should at all times be freely acknowledged.

The history of the organization of the past and present dental colleges of America has been published in "The History of Dental and Oral Science in America," 1876. From this and from Dr. Eliot's address, delivered before the American Academy of Dental Science, 1879, and from the prospectuses of the American dental colleges, I shall take such facts, as should be stated in acknowledgment of the work of our predecessors, and of those differences of method or requirements in education, which differences of attendant social or national opinions have rendered desirable or necessary.

The distinguished president of Harvard University, Dr. Eliot, in his admirable address on "Dental Education," divided the subjects which constitute the fitting education of the dental surgeon into those which are peculiar to the general and to the special surgeon, and those which are common to both. The general he estimates as three-fifths, and the special subjects as constituting two-fifths of the whole education; and there will be few dissentients to this division. Keeping Dr. Eliot's estimate in mind, but that the medical degree was given and taken on such easy terms, it would have been difficult from our standpoint to understand how it was that so many of the dental colleges from the first undertook to educate their students in medicine and surgery, in the presence of schools devoted to these subjects, furnished with all the multitudinous appliances necessary for success in teaching, and with teachers of experience and distinction; and with the further evil of withdrawing the dental student from advantageous association with the general student in the study

of subjects common to general and dental surgery. The separation of the students by this limitation to a special school engendered a distinction of social position to the obvious disadvantage of the dental practitioner, whose pretention to the necessary amount of medical or surgical knowledge would be challenged by those who had studied under more favorable circumstances and under the guidance of established teachers. For however little professional education may be forced upon the individual student, there has never been a time when a diligent and determined student could not acquire a competent knowledge of his profession in the medical schools of America or of our own country.

Even a casual study of the organization of the American dental colleges leads to the inevitable impression that the Americans were, and indeed still are, strongly and rightly impressed with the absolute need of thorough training; and although not in a position to enforce the acceptance, yet felt bound to offer to students every inducement to acquire a sound knowledge of the special subjects, and of the requisite manipulative skill. The general subjects appear to have received less attention, or, at all events, occupied in the college prospectus a less prominent position. In some cases, indeed, it would almost seem that a college faculty thought that a sufficient knowledge of general surgery could be acquired in the study of the special subjects of dental surgery.

It has been urged that dental should come as supplemental to medical knowledge, that the practitioner should be a medical man first and a dentist afterwards. This opinion might be sustained if the position were reversed—a dentist first and doctor afterwards—provided all students, or even the majority, were sufficiently rich in money and time to extend the educational period from four to six years, or from three to four and a half, a condition of things which obtains neither here nor, according to Dr. Eliot, in America.

Four years are allotted to the study of medicine, and the medical student has not an hour to spare for any other subject, hence it becomes needful to determine what subjects in the medical curriculum can be lessened in extent or wholly omitted, so as to find time within the same four years for the effective study of dental surgery as a science and practice. This problem has not, perhaps, been wholly solved, but, as the latest organizers of a complete scheme of compulsory dental education, it is hoped we may claim to have provided the most complete curriculum hitherto



brought into a national use. The details of this were determined by a committee of the Medical Council, consisting of the representatives thereon of the medical authorities which, under the Dentists' Act, grant dental qualifications, the twenty years' experience of the College of Surgeons of England being placed at their disposal. They reported in favor of, and the Council adopted without material variation, the curriculum originated by the aforesaid College. The unconditional insistence upon an attested preliminary education before a person is allowed to commence his professional studies is a feature of great importance in the existing regulations, inasmuch as it insures to the student an amount of knowledge and of mental training which renders him competent to understand without difficulty the language of science and to follow with comparative ease the methods of scientific instruction and investigation. Before this great educational step was taken pupils not uncommonly entered upon their professional studies so poorly informed that much time was lost in the attendance upon lectures which they but very imperfectly understood, and, consequently, at the outset several lectures had to be delivered for the purpose of general instruction, and thus of preparing the student to take advantage of the subsequent course rather than of imparting available medical knowledge. Much has been said against the vast numbers of lectures students have been required to attend, and especially against repetitions, and the objection is no doubt valid now that preliminary education is enforced, and the students thereby enabled to learn as much from one course as they formerly did from two courses. There may be difference of practice, but there can be no difference of opinion here or elsewhere as to the advantage to the student of an attested preliminary education.

The conditions imposed upon dental students are, that he shall subsequent to his having passed the preliminary examination in general knowledge common to the dental and medical student, have devoted four years to the acquirement of professional knowledge; have been engaged during a term of three years in the acquirement of a practical knowledge of clinical dentistry under a competent instructor; have attended and taken part in the dental practice of a recognized dental hospital, or the dental department of a recognized general hospital, during a period of two years; have attended two courses, or not less than twenty-four lectures, on dental anatomy and physiology, human and comparative; two

courses, or not less than twenty lectures, on dental surgery ; and not less than twelve lectures on metallurgy, and a like course on mechanical dentistry.

These then are the subjects and conditions which take the place of those remitted from the medical curriculum, and who can justly say they do not impose a tax equal to the remission, upon the intelligence, the industry and the time of the student? It may indeed be contended that a greater load is imposed, for it is the opinion of those engaged in instruction, and of those recently instructed, that nothing can be remitted from the special division of the curriculum. The hospital attendance must be exacted almost day by day during the two specified years, in order to attain adequate manipulative skill, without which the practitioner would be as the musician who cannot play, the artist who cannot draw, the sculptor who cannot use the modeling tool or the chisel, or the dental critic who should be able to surpass, but cannot equal, the work he condemns in others. It is one thing to know the scientific principles of the art, but it is quite another to carry them into effect. This requires an amount of manipulative power, which can only be obtained by long and careful practice under a competent instructor. The fingers must become unconsciously obedient to the will ; they must follow it automatically, as the fingers of the skilled pianofortist execute the mental reading of the work he is playing, or as the hand of the sculptor produces the form the mind has conceived. Short of this unbidden obedience of hand the performer would be but an amateur and his professional life one long apology.

It will be admitted by all that skill of hand can be attained only by long practice, and few will contend that one time is as good as another for the training. Mr. Fawcett has told us that the blind may be taught a bread-winning trade in their youth, but that adults who have lost their sight cannot acquire sufficient skill to secure independence. We know that successful musicians and artists commence their studies in youth, and have given promise of power before they have attained to manhood. If we turn to the artizan class it will be found that he who fails to acquire skill of hand during his apprenticeship seldom attains to excellence afterwards. There is no reasonable ground for doubting that the hand in youth develops anatomically in the direction of its exercise, and acquires thereby a power in that exercise to which the

adult hand seldom attains. These facts have an important bearing upon the question of the time at which the dental student should proceed with his practical education, for the skill needed by the dentist is inferior to none of these. The results of professional examinations fully establish the fact, that the medical and dental curriculum cannot be honestly fulfilled in the same four years. Yet it has been said that the practitioner should be a surgeon first and a dentist afterward, or, in other words, the entrance upon the special division of the dental curriculum, should be delayed until the surgical education is completed, thus deferring the manipulative training to a period when the attainment of excellence is difficult, and in its highest degree, perhaps, impossible. To devote the days of our youth to the acquisition of knowledge we do not intend to increase, to the exclusion of the knowledge by the exercise of which we propose to gain our bread, would be, I contend, a great error, and the more so, as the remitted portions of the medical curriculum can, if desired, be taken up when the dental education is completed.

My strong advocacy of special, must not be interpreted as indifference to medical, qualifications. I would give every possible encouragement to the attainment of the latter, not, however, as a substitute for, but as a supplement to the dental degree. Educationally, the relations of the membership to the dental license may be regarded in the same light as the relation of the fellowship to the membership are regarded. This view will indeed take effect in certain appointments. In many of our hospitals, although the membership of the College of Surgeons is a full qualification, the governing body require that their surgical officers shall be Fellows of the College. Whenever the Fellowship of his College is required of a candidate—provided the Fellowship implies a higher degree of professional knowledge than the Membership—it may justly be required of the dental candidate for office that he shall possess the Membership in addition to the dental license of his college.

In reviewing the task imposed on the student, it may be asked whether I have not overstated the amount of special training needed to ensure the acquisition of the necessary manipulative power. I would answer, No, with all the emphasis of which I am capable. For I contend that a high degree of skill of hand is absolutely necessary to professional competence—that competence is necessary to self-respect—and that self-respect is necessary to that professional

rectitude, without which personal comfort in practice would be imperilled, and professional status would be but a shallow fiction.

Furthermore, that with the existing opportunities a high degree of skill can be gained by perseverance and due expenditure of time in pupilage, and that it is the bounden duty of the teacher to press, and for an examiner to demand, its possession.

Such, then, are the lines upon which the study of dental surgery have been drawn—so drawn as to secure adequate knowledge and skill in the practitioner—and with the view, therefore, to a certain difference in *kind*, but to equality in *degree*, between the compulsory education of the medical and of the dental practitioner.

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## EDITORIAL NOTES.

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### THE "RECOGNITION" QUESTION.

IN this number of the MISCELLANY our London correspondent gives us his views of the reason why American dentists are clamoring more for recognition than are the English. There is one reason, however, which he does not touch, but which we think will be regarded as potent by our trans-Atlantic friends. In this country there is a feeling of equality among us which is indigenous to our soil. There is no lifting of the hat, no bending, such as we see in the old settled lands of the East. The dentist feels himself, as a man, the equal of anybody. This feeling of equality as a man easily extends to a feeling of professional equality when the cases of a dentist and a physician are concerned. The fact that the dentist equally with the physician is called "doctor" in this country also tends to make the former desire the recognition of his fellow doctor. In England there is a gulf fixed in the popular mind between a dentist and a physician. The one has a title and the other has it not, nor dare he assume it, or the minions of the law would soon be after him. The public see no more reason why a dentist should be called a "doctor" in England than why a chiropodist should be called one. This is undoubtedly due in some degree to the slow progress the profession has made in England in catching up with the doctors of medicine, but the time is rapidly approaching when things will be changed.

The fact is, there is not so wide a chasm between the knowledge of the American physician and that of the American dentist as between the English physician and the English dentist. Such being



the case, the equalization of honors is not so far off and not so difficult of attainment here as there.

#### DR. ATKINSON AND A UNIVERSAL LANGUAGE.

An effort has been made by Dr. W. H. Atkinson, of New York City, to interest the members of the American Dental Association in the subject of a universal language. Recognizing the fact that the facilities for expressing oneself are not as great as they should be, he comes before us as one of the reformers who desires to change the present order of things. Hitherto his efforts have not met with nearly as much encouragement as he has felt that they deserved. On more than one occasion he has met indifference with words of harshness. More than once he has posed before his dental brethren as Benjamin Disraeli did before the House of Commons when he uttered that now historical sentence, "The time will come when you shall hear me." Disraeli's prophecy was right. Dr. Atkinson's may be. Time only can prove. The dentists who have been addressed by the doctor on this question of language reform cannot see that the matter affects them particularly. However much it may please Dr. Atkinson to study it, to them it is dry. Why should they bother themselves about the extraordinary forms of speech introduced by the doctor? Will it help them fill a tooth, or fix a plate, or diagnose a case? They fail to see that it will, and, consequently, feeling that their time is now fully taken up, they treat the language reform with indifference.

Truly the way of the reformer is hard. It always has been hard ever since the world began. Man is a conservative being, ever making mistakes and conserving the bad with the good. But then reforms, so called, are so plentiful, springing up everywhere with such alarming rapidity that a man cannot examine them all, even casually; and so the most abstruse, even if they are the best and the most honest, are liable to go unexamined. Angels often are entertained unawares. The trouble is, all "reforms" pose as little angels when in their embryonic condition, and it is difficult to tell which is genuine and which is not till a trial has been made.

We are not prepared to pass judgment on Dr. Atkinson's scheme—or, rather, the scheme which he endorses. Not a word of objection to it can we raise. The need of some system which will expand the facilities for expressing one's thoughts is felt by everybody. But after all, the question arises if this want is not supplied

gradually by the introduction of new words, as new thoughts and things need describing. A living language is a naturally growing thing, and cannot be forced to grow beyond a certain speed. All that is done to cause it to change or grow beyond what is normal cannot be successful. The question is whether this new system is normal or abnormal? Students of language only are competent to form a valuable opinion after a close examination.

#### DEAFNESS.

A few words on a subject which has a close relationship to that of dentistry—total deafness. Next to doctors, dentists have more frequent opportunities than any other body of men to give good or bad advice to the friends of those suffering from this terrible misfortune. It is assumed by a great many people that dumbness is a necessary concomitant of total deafness, if such deafness is congenital, or if it has existed ever since the patient was too young to have already acquired intelligent speech. This assumption is a wrong one. It is a matter of congratulation that the United States, as a nation, is leading the world in proving its fallacy.

There are, speaking broadly, two methods of teaching the totally deaf. One is by the French method, in which signs are used; and the other by the German method, in which articulation is taught. Those instructed according to the French method are unable to converse with any one except those who have also learned the sign language. The disadvantage of this is very great, and shuts the afflicted one up in a very narrow circle. By the German method the pupil reads on the speaker's lips the words he utters, and speaks himself in the ordinary way in reply. The pupil is taught articulation by watching and imitating the oral movements of the teacher. For example: he watches how the tutor expresses the sound represented by "f," by "ow" and by "l," and imitates him. The word "fowl" is the result, and so on throughout the vocabulary. The process of teaching is a long and tedious one, but so is every process of teaching, and it pays in the end. Those who have not examined the merits and demerits of the different systems will do well to do so.

#### NATURE'S WORK.

THE naturalist is continually meeting with illustrations of the fact that Nature is always providing for an evolution of the superior from the inferior. Animals are continually developing those organs

which will render them most service. Those, on the other hand, which are unused become gradually feeble and finally disappear, while those for which the exigencies of life find the most to do develop. For example, we find the babaroussa, a species of wild hog, has its upper canine teeth modified in a most singular way to serve as a protection to the eyes, as the animal forces its way through the dense undergrowth of the tropical forests. They rise almost vertically through the upper lip, and frequently curve backward so much as to pierce the skull. The beaver, with his sharp, chisel-faced front teeth, will cut down and carry off trees as big as a man's thigh, gnawing the wood all round, but cutting it higher on one side, so as to determine the direction of the fall. In one place on the banks of the Missouri the timber was completely penetrated for a distance of three acres, and in great part removed, although the trees were very numerous and of considerable size. So hard is the enamel of the beaver's tooth that when fixed in a wooden handle it makes a very respectable chisel, and, according to Sir John Richardson, it is used by the Northern Indians to cut bone, and to shape their horn-tipped spears, etc. The incisor teeth of the agouti, another of the rodents, are used in the same way by the Brazilian Indians to fashion the blow-tubes, with which they bring down small birds and monkeys. What the little beaver does for building materials the gigantic megatherium appears to have done for food. This huge extinct sloth seems to have had for its pleasing task to uproot and tear down large forest trees for the purpose of feeding on the branches.

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#### DR. M. H. WEBB CRITICISED.

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DR. EDGAR PARK, of 1418 Washington avenue, St. Louis, writes to us criticising the paper by Dr. M. H. Webb in the September MISCELLANY on "Restoration of Contour, etc." Dr. Park says: "The objection to the paper is the air of originality with which it is clothed and spread before the world. Twelve years ago this identical principle was advocated and practiced in this city (St. Louis), and about that time I read a paper covering the same theory. . . . I believe Dr. Webb gives to Dr. Atkinson the credit of the idea which he publishes as being his method of operating upon proximal defects in the teeth. It is all a mistake. It is no new thing, and all the credit that is due to the writer of the paper is his ability to perform the operation."

## PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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THE *Ohio State Journal of Dental Science* comes laden with good things. The opening article by Dr. Betty on the Geographical Distribution of Dental Caries in the United States opens a wide field of great interest. He makes the very practical suggestion that every dentist note down in a blank book, ruled for the purpose, the few facts regarding each mouth that have come under his notice for a year, and then send the collection to the State Society. There is poetry and pathos in Dr. Jackson's poem on "Duty." J. W. Cornelius theorizes on "The Duty of the Hour." He ventures the opinion that "if the flood of young dentists were dammed up for ten years the standard of dentistry would be greatly elevated." That is exceedingly doubtful—in fact, it is about certain such would not be the case. To dam up the flood would be to prevent the admission of those clear, energetic, bright minds who are the heart and soul of progress. At the end of the ten years we should have a band of rich old fossilized dentists. Is not our friend in a little too great a haste when he says "dentistry has progressed until to-day the medical profession extends the brotherly hand of fellowship and bids us god-speed in the good work?" Somewhat as an antidote for the remarks of Dr. Metcalf in the last number of the *Journal* Dr. Overholser affirms that "prosthetic dentistry affords opportunity for the best taste and skill in the profession." A suggestive article on "Dental Stupidity," by Dr. Jackson, calls attention to the large number of men there are ready to supply low-price dental work who have D.D.S. attached to their names. What a glorious thing it would be to have a law enforced in this country by which no man would be allowed to call himself "Doctor" without good reason. A man at Vienna was recently fined for this offence. Such a law is a public protection. Dr. Jackson refers to the trouble the young graduate experiences in getting remunerative prices for his work. As a rule, let us add, a man gets as much for his work as it is worth. If he does not it is most often his own fault. "F. M." contributes a sarcastic article on the question of a divorce between mechanical and operative dentistry which is well worth perusal. The remaining features of the magazine are exceedingly well filled.



The *Cosmos* opens with an article in reply to the question, "Ought the practice of dentistry to be regulated by legislation?" The writer (Dr. Wm. Barker, of Providence, R. I.) argues that it ought not. Dr. John D. Clark, of Newbern, S. C., contributes an article on "Caries of the Teeth;" Dr. J. Foster Flagg reviews the past in an article entitled "Credit to Whom Credit is Due," which will prove of interest to all who have studied, from whatever point of view, the "new departure" theory.

The *Detroit Lancet* reproduces a portion of the address, delivered at the International Medical Congress by Dr. J. S. Billings, on "Our Medical Literature." Among other things this address states that there are extant about one hundred thousand volumes of this literature and about twice that number of pamphlets, and this stock is increasing at the rate of fifteen hundred volumes and twenty-five hundred pamphlets yearly. There are 180,000 doctors possessing diplomas in the world for whom this literature is provided. Eleven thousand six hundred persons produce it. Among other interesting things the Doctor gives us the following rules for the preparation of a magazine article, and these rules are as applicable to writers for dental as medical magazines: (1). Have something to say. (2). Say it. (3). Stop when you have said it. (4). Give the paper a proper title.

The *British Journal of Dental Science* contains an article by Mr. King, of Worcester, England, who cites cases in which he claims that protrusion of the upper incisors was induced by "tongue sucking." The article is suggestive and interesting. The hackneyed subject of "Professional Fees" is dealt with by Mr. Hodge. The only excuse for the article lies in the fact that dentists are exceedingly interested, as a rule, in discussions of this question. There is nothing particularly new in the contribution, nor, in fact, would it be easy to say anything on fees that had not been said many times before in one shape or another. Dr. John A. Fothergill steps into the confessional and admits having caused inflammation of the pulp of a tooth (the ultimate result of which was that the tooth was extracted) by the use of chloride of zinc. A thoughtful article of a general character on the causation of dental caries appears in the editorial pages. This number of the magazine is specially full of valuable contributions and reports.

The *Dental Jaiurus* opens with an article on the treatment of sensitive dentine by Dr. C. E. Blake, sen., of San Francisco. The

subject is dealt with at considerable length. The well-worn topic of Dental Education is taken up by Dr. Henderson. He deprecates a waste of time on the part of the student in learning Greek and Latin. The doctor is somewhat incomprehensible when he says: "As for [the dentists] being scientific, I think it is all fancy and far-fetched. We may, out of the great number, find enough scientifically inclined to fill the chairs of our colleges with ability. It is too much to expect of a specialty, so contracted in its nature as that pertaining to the oral cavity, its diseases and accidents." The doctor is, I fear, pursuing a wrong line of argument here. Every piece of work the dentist does should be done scientifically. Science and empiricism are opposed. The dentist who is not a scientific man is an empiric. The world is too old to tolerate empiricism without wincing. It must be improved off the face of the globe, and dental colleges should have a hand in the good work. Dr. Henderson, instead of condoling (as he does further on) with dentists who profess to have no time to read their dental journals, instead of asking in a sympathetic manner "how can such men become learned or scientific?" ought to thunder at them when he meets them—thunder at them *viva voce*, for that is the only way to get at them. Dr. H. D. Cogswell, the veteran dentist, read a paper in September before the Pacific Coast Dental Society, which is given in the *Jairus*. It is of value and interest.

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FIRST DISTRICT DENTAL SOCIETY, NEW YORK.—We are compelled to hold over our report of the October meeting of the above Society till next month.

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DENTISTRY IN FRANCE.—We have received an elegantly-printed circular from the School and Hospital of Dentistry at Paris. The circular reveals the fact that our French friends know how to conduct a Dental College, and we wish them the success they deserve.

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BEFORE the next century gets so far advanced as the nineteenth is now great revolutions in medicine, and science, too, will have been effected, concerning which we at times only faintly dream.

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MANY of us feel life to be so short that we want to begin it at the earliest possible moment, little thinking that by beginning so early to tax our powers in the race for learning, position and wealth we are already curtailing that life which we feel already to be too short.

SWALLOWING FALSE TEETH AND PLATE.—DEATH  
FROM HÆMATEMESIS.

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By J. H. GARDINER, M.B., L.R.C.P. Lond., Etc., of London,  
Ontario.

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ON January 20th, 1881, Mrs. B——, aged thirty-three, was supping some soup, when a plate with two false teeth attached became loosened and slipped down her throat. Violent retching followed, lasting for several hours, but was finally allayed, whether from the stomach becoming accustomed to the foreign body or from bismuth freely administered I do not know. A dull, heavy pain was complained of over epigastrium and in the back over region of stomach, which remained until death. The retching at times recurred, but only slightly. A difficulty in swallowing was complained of, even liquids causing pain. I ordered her to remain in bed, and to take bread and milk, corn starch, or any fluid or mucilaginous food. My instructions were not followed, but the patient persisted in keeping about and doing her usual "housework." Just one week after the accident happened the patient was seized with violent hæmatemesis accompanied with purging.

Dr. Charles Moore, sen., saw the case with me, and we agreed as to the cause of the hæmorrhage, viz.: the severing of one of the arteries of the stomach. Ergotine was used hypodermically in eight-grain doses every three hours. All efforts of treatment by the mouth only aggravated the symptoms. The vomiting soon ceased, but the purging continued until the end; and seventeen hours after the appearance of the first urgent symptoms the patient died. In the absence of an autopsy, I can only say that I think the accident was caused by a sharp angle of the plate, which was broken previously, being caught in a fold of the stomach near the cardiac orifice, and this had severed one of the arteries of the stomach. Now, in a similar case, where one is certain that the foreign body has become impacted, what would be the best line of treatment? The wait-and-see-what-will-turn-up style resulted in my patient turning under. Could not some instrument be devised to remove, or, at least, to break up, a foreign body in this situation?—*Canadian Journal of Medical Science.*

JOHNSTONS'

# Dental Miscellany.

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VOL. VIII.—*December*, 1881.—No. 96.

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## DISCONTINUANCE OF THE MISCELLANY.

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### *To our Readers :*

THE cordial support given by the dental public to the DENTAL MISCELLANY has made it a very uncongenial task for its editor and proprietors to discontinue its publication. This number completes the eighth year of its existence. The MISCELLANY has had no enemies, but very many warm friends, and if other duties did not imperatively demand our personal attention we would continue it, notwithstanding our changed business relations to the profession. The MISCELLANY has done something, we think, to aid in the progress of the profession, which has during these eight years been decided, and which is evidenced by more universal interest in the meetings of the various dental societies and in the improved demand for dental literature, more abundant supply of matter for such periodicals, and the improved grade of journal demanded. We hope that one of the influences of the MISCELLANY on its readers has been to increase their relish for dental information, and that those who have depended on us hitherto will not now permit themselves to be deprived of their usual supply of it. There is no other way of keeping up with the age, and certainly the amount of your subscription to two or three dental publications is insignificant in comparison with the return made you by them. We trust that all of our old friends will become subscribers for the *Cosmos*, if they are not such already. It is published by the Company—The S. S. White Dental Manufacturing Company—established by the trustees of the late S. S. White and Johnston Brothers, and will have the earnest support of the members of our late firm. EDITOR.



## HISTOLOGY.\*

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BY W. H. ATKINSON, M.D., D.D.S., NEW YORK CITY.

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WRITING on histology is much like writing on anatomy, and involves so much repetition and amplification of statement, even where new views are set forth, that the writer can only look for appreciative attention from those who are sufficiently conversant with the text of what is already written as to discriminate between reiteration and new statement, and new presentation of discovery or interpretation; or look to those who are mere beginners and unable to more than partially follow attempts at elucidation of the subject matter of the origin and growth of tissues. All that had been written up to 1874 is vague and unsatisfactory in classification of the changes occurring in embryological histology.

Hence, those who have not kept pace with the grand revelation of molecular metamorphosis as displayed through the brilliant discovery of Heitzmann, showing protoplasm to be an organized tissue, and therefore the unitary base out of which all cognizable tissue takes origin and derives its support, are handicapped with mass-generalizations of authors' standing in the text-books as first postulates of the changes of embryological production of tissues, organs and systems.

My justification for presenting so deep and erudite a subject has its base in two facts—the first is my strong desire to have every dentist a master in diagnosis, which is impossible without a knowledge of the origin, maintenance and reproduction of tissues; the second is a polite request from the Secretary of this Society to present a paper on this subject before it at Greenfield in June. What might be regarded as an advantage is really a complication and embarrassment. I mean that this body is made up of sharp Yankees, educated more or less under the dynasty of histological teaching, which is such a stumbling block in the way of our progress. Were it not that your confidence had been won heretofore through earnest endeavor to spread the light, I would have less hope in advising you to get rid of the errors complained of embodied in the regnant literature in histology, and for each one to start anew

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\* Read before the Connecticut Valley Dental Society, May 18th, 1881.

in personal research under the best living assistance attainable, with nature, a microscope, and a small botique of instruments as the means of histological attainment.

I am aware that I shall meet the opposition of all those who have these tabooed books for sale, and of those who are too indolent to do more than memorize the statements in them; but to men of conscience, who will not be satisfied short of a sure foundation for diagnosis of the cases they treat, I look for ardent and joyous support and assistance. Commendable and necessary as the steps recorded in these books formerly were, they are now too massive and indefinite to be longer tolerated. I may give you one instance as proof of what I say. The embryonal sheets were first discovered and announced by G. Remak, of Berlin, in the sixth decade of the present century, who, brilliant as he was, regarded them as two (now known as epi-blast and hypo-blast), failing to make the discrimination of the meso-blast as a distinct layer between them, but correctly attributing to the inner surface of the former (the epi-blast) its proper function, of being the producer of nerve-plates.

The German histologists are, like other scientific men, made up of cliques, who sometimes act unjustly toward discoverers by ignoring them and giving the credit to others, sometimes pupils of the discoverer. An example of this is well known to have occurred in Berlin, where this discovery was attributed to a histologist, by name B. Reichert, still living, who seems to have been willing to accept whatever credit attached thereto in the face of a knowledge of the facts as they were. Remak died of carbuncle, or "malignant pustule," and hence his claim and right can only be defended by those conversant with the history and growth of histological attainment. I cite this to show that histology is a progressive science, and we cannot tarry in past discoveries, however brilliant they may be, as they stand in the relation of embryonic condition of histological science as now being wrought out by Carl Heitzmann and his followers.

This discovery of Remak was a great step toward a just apprehension of the first lay out of the tissues and organs of the animal body. These are now known as epi-blast, meso-blast and hypo-blast, proliferations from the surfaces of which, in the shape of embryonal corpuscles, gathered into masses now known as proto-vertebræ, present us with discriminations finer and more distinctive than any possible to him who tarries in the conception of the three em-

bryonal sheets, being the veritable producers of the lay out of the animal body.

In a vague and massive sense they are just this thing, but we must go further than that, deeper and finer, to enable us to grasp the steps of typical dominion in alternations of generations of prime ordeal preparatory bodies, through which steps all the organs have to serially pass, at the behest of type, to constitute a complete system or functioning organism. Taking proto-vertebræ, which are none other than masses of undifferentiated proto-plasmic bodies known as embryonal corpuscles, as the first lay out or generation of tissue from indifferent protoplasm, we have learned that these (proto-vertebræ) divide into categories of bone-plates, nerve-plates and muscle-plates, from which the bones, nerves and muscles arise.

Were we to take a portion of each variety of proto-vertebræ and put it under the microscope, we have as yet no means of distinguishing them as bone-plate, nerve-plate or muscle-plate, and our only means of recognizing them as such is a knowledge of the location in the embryo to which bones, muscles and nerves appertain. This is a discrimination that the old histologists knew nothing of. The next great advantage resulting from a study of histology is the demonstrative discrimination of inflammation, the basis of pathological change: only inspirationally known to John Hunter and his followers, in mass presence in his definition of the inflammatory process, in which he perceived, as he recorded, "that inflammation is none other than the return of the tissues to their embryonic condition;" but what that embryonic condition was he had not a sufficient knowledge of histology to demonstrate. I may be pardoned for citing this as a proof that truth is revealed to earnest minds who are in receptive condition by reason of their honest purpose to know.

I do not object to histologists recording the interpretations of what they see as adequate explanations to their minds, but I do object to their requiring their readers to accept their special statement without a fair presentment of the specimens they claim to bear the interpretations they record.

The limited time that can be devoted to this transcendently profound and worthy subject forbids a lengthy detail of exhibition of fresh and prepared specimens in justification of the interpretations claimed to be so new and valuable by me as the one referred to, of Dr. Heitzmann, namely, the organization of protoplasm, which

becomes the corner-stone of certainty and the point of departure for every investigation into the behavior and condition of the factors of function in the human body.

Not to be tedious to you, and yet to gratify my own ambition to do you the most good possible in the time at command, I will now invite questions, objections and other means of bringing out and confirming, as far as possible, the physiological and pathological aspects of histology as advocated in this short paper.

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### CHEMICAL ABRASION.\*

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BY ISAAC B. DAVENPORT, M.D., D.D.S., WILLIAMSTOWN, MASS.

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THE cause of chemical abrasion affecting only the cutting edges of the anterior teeth has never been satisfactorily explained in any of the literature that I have been able to find upon this subject.

The condition is well illustrated and described in *Harris' Dental Surgery* under the head of "Spontaneous Abrasion," and is well shown upon this model which I will pass for your inspection, where you will notice that only the upper incisors, and to a slight extent the canines, are affected. Sometimes the abrasion involves the upper and lower teeth, and when fully developed leaves an elliptical space which exactly corresponds with the boundary of the labial commissure when open, as during ordinary conversation, or as in the natural position of those who have the habit of going with open mouths. The cause of this form of abrasion Harris is inclined to attribute to accidental mucus, which he supposes to be secreted by a mucus gland, which Dr. Nuhn, the German physician, claimed to have discovered on the tip of the tongue. Good authorities have denied the presence of this gland, and if this theory is correct the abrasion ought always to effect the lower teeth as much as the upper teeth, which is not as often the case. Besides, the lingual and palatine surfaces ought to be most acted upon, at least during the progress of the disease; but just the reverse is true, for it is the labial surfaces that are first and most affected.

No longer ago than February, 1878, a paper was read before the Alumni Association of the Philadelphia Dental College, an abstract of which may be found in the July *Cosmos* for the same year, in

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\* Read before the American Dental Association, 1881.



which the same condition was described. The conclusions of Harris were simply repeated, and no further light was thrown upon the cause. In the second number of the *Ohio State Journal of Dental Science* the editor replied to the query: "If in chemical abrasion or corrosion the abrading agent is recognized." He answered, "Yes; lactic and acetic acids," basing his conclusions upon the following reasoning: "In abrasion the surface is left clear and clean, the organic and inorganic matter being removed to the same extent. This proves that the abrading agent forms soluble compounds with all tooth substance, otherwise debris would remain. It also proves that the corrodient dissolves the two kinds of tooth material with equal facility." He further says: "Of all known acids but two have the necessary solvent—these are lactic and acetic acids, and those have the power only while in their nascent state."

While this may well explain that abrading process which we sometimes see on the labial surfaces near the gums, it is not a complete explanation of the abrasion of the cutting edges, for, while these acids may cause this condition, they are not the only acids which do it; nor is it necessary that the corroding agent be one which acts equally with the organic and inorganic constituents, for if any acid which dissolves lime salts is brought into contact with the cutting edges of the teeth there will follow the same result, viz.: a smooth abraded surface, because the soft organic materials will be polished away by the food, lips and tongue as fast as solution of the inorganic constituents advances. In 1875 the following case was noticed, from which the present model now being passed was made: It was that of a man 29 years of age, of robust physical development and teeth of excellent quality, there being no decay of the upper teeth, although some of the lower molars had been lost. The superior central incisors were worn away one-half of their length, the laterals to a less extent, and the canines a very little; the other teeth were not affected. Thus a wide space was left between the upper and lower incisors where the teeth were closed. No teeth could be seen during conversation, as they were worn away even with the line of the lips. The lower teeth, being entirely covered, were not affected. Up to eight years before he had lived on a farm, and at that time his teeth were perfect. He then engaged as a workman in the manufacture of oil of vitriol, where, to use his own expression, "the escape of gases from the retorts set his teeth upon edge," and he soon noticed that they were

wearing away. He said that the teeth of all the other workmen were more or less affected according to the extent to which they were left uncovered by the lips, and, in some, both the upper and lower teeth were involved. The patient said that the entire wearing away of his own teeth was accomplished within six months after entering the factory, during which time the abraded surfaces were sensitive to touch, heat and cold. . . . Shortly after another case was noticed in which the abrasion was in progress. The patient, a man about thirty-five years of age, had for a short time been engaged in Prof. Mowbray's Nitro-Glycerine Works, where nitric acid and sulphuric acid were manufactured in making glycerine. The labial surfaces of both upper and lower incisors were worn away one-half of their length, being abraded off from a point corresponding to the line of the lips to the palatine surface, and involving the cutting edge. The patient said that most of the wearing had been accomplished within two weeks after entering the factory, since which time he had learned to keep his mouth closed while at work. Some of the workmen protected their teeth by wearing thin pieces of gutta percha, molded upon their labial surfaces.

A scientific paper, bearing upon our specialty, says: "It is easily explainable in your cases why just the incisors and canines were cut off. A person breathing through the mouth must necessarily draw the acid air over those teeth, and the acid condenses upon them, dissolving the lime salts, and the food, tongue and lip slowly remove the softened tooth substances. The molars do not come much in contact with the acid air: first, because the greater part of the acid fumes have been absorbed and neutralized by the incisors, etc. Vapors of volatile mineral, or organic acids, when inhaled through the nose, are quickly neutralized, and have no effect upon the teeth. This action, erosion and solution of the teeth by acids is well known by chemists, and we keep our mouths closed when experimenting with acids. "The destructive agent in these cases is not any peculiar acid, but any acid provided it is volatile."

Professor Mayr mentions another essential condition for preservation of teeth in an acid atmosphere, viz.: "That the lips be dry, as on moist lips acid vapors will condense, and, on opening the mouth, be brought into contact with the incisors and canines, and the same result follow as when the fumes are inhaled."

From the foregoing considerations may we not safely conclude that the etiology of chemical abrasion of the cutting edges of the

front teeth (or the so-called spontaneous abrasion of the older writers) is the direct contact with the teeth, by inhalation, of any volatile acid, mineral or organic, which is capable of dissolving lime salts?

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### FATALITY IN A DENTIST'S OFFICE.

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BY W. F. KELSEY, D.D.S.

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MARSEILLES, *October 25th*, 1881.

A most remarkable instance of death, under the hands of a dentist, occurred in this city upon the 20th of the present month. The circumstances of the case were as follows :

Gustavus Zach, a Swiss by birth, and about twenty-six years of age, called upon M. Koch, a dentist, native of this place, for relief from the pain of an offending molar. An attempt, that appears to have been only partially successful, was made to remove the diseased organ. The shock of the operation produced a fainting fit of so alarming a character that a physician was called. After the application of the usual restoratives the patient revived and wished the operation continued. The physician and dentist both attempted to dissuade him from this determination, but without avail, and preparations were accordingly made for the termination of the operation. His nervous apprehension was, however, so great that before the instrument could be introduced into his mouth he relapsed into a state of syncope, from which all efforts failed to revive him. As all attempts to again restore him to consciousness gave no promise of success he was removed to the hospital, where he shortly drew his final breath.

A post mortem examination revealed the fact that death was the result of cerebral congestion, supposed to have been superinduced by the emotion attendant upon the operation. Some congestion of the lungs also existed, together with slight pleuritic adhesion, but this was only incidental, and had no immediate influence in hastening his demise. The physician, Dr. Fanton, stated to me personally, that the patient exhibited an apoplectic tendency, to which he would eventually have succumbed, so that the unlucky star that guided him to the dental office only precipitated an already predestined event.

A LETTER FROM MR. FLETCHER.

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EDITOR OF JOHNSTONS' MISCELLANY : In reply to Dr. Mayr's note, I criticised his paper not as a chemist but as a dentist, in fact, as one to whom his paper was addressed. Precipitated silver, mixed with mercury in any proportion which will set hard, expands more or less during the hardening. The fact that it does so is well known. If Dr. Mayr fails to find the expansion he had better try again. The amount of expansion has been repeatedly measured and repeatedly published in dental journals years ago. I have not a file at hand, but I know it has been published in the *British Journal of Dental Science*, and I believe the figures and measurements were given by Charles Tomes.

The heat given off in the combination of silver and mercury is in itself no proof of chemical combination, but combined with the fact that mercury does not separate with heat either so readily or so completely as it does from other metals with which it does not combine in the same manner, there can be no doubt that some chemical combination does take place.

Referred *as a dentist* to the intense hardness of silver amalgams as compared with many other amalgams. With regard to the resistance of oxyphosphates as compared with oxychlorides. If two good plugs are taken, equal weights and equal exposed surfaces, and immersed in succession in weak hydrochloric, sulphuric, nitric, acetic and tartaric acids, and then in weak caustic soda, potash and ammonia, all the immersions being for equal times and under precisely the same conditions, the average total loss will be from 5 to 10 per cent. greater in the oxyphosphate than in the oxychloride. Further than this, I have inserted both side by side in the same mouth, both as fillings in teeth and as blocks on plates, and found in almost every case the resistance of the oxychloride to be distinctly greater than that of the oxyphosphate.

Dr. Mayr again refers to an amalgam becoming cemented to a tooth. As I understood his statement it means that an adhesion takes place between the two, which is not the case. If he did not mean this I do not know what he did mean.

Dr. Mayr's paper was addressed to dentists, and as a dentist would understand his statements they were taken. Any criticism from a chemical point of view was not attempted and would have been out of place. As an average dentist would understand his



statements they were misleading, although, taken from a purely chemical point of view, they might be correct. I did not question Dr. Mayr's knowledge of chemistry, but simply objected to his application of it *as a practical dentist*, taking his terms as his audience would understand them if they were dentists with a limited knowledge of chemistry.

THOS. FLETCHER.

WARRINGTON, ENGLAND, *Nov. 5th.*

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### REPLY TO DR EDGAR PARK'S "CRITICISM."

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TO THE EDITOR OF THE MISCELLANY :

My article on "Restoration of Contour," published in the MISCELLANY for September, 1881, was written for the purpose of simply stating what I regard as the only way to keep the enamel of the proximal surfaces of the teeth permanently separate and prevent further decay ; but Dr. Edgar Park, of St. Louis, states that "twelve years ago this identical principle was advocated and practised in this city (St. Louis), and about that time I (Dr. Park) read a paper covering the same theory." I would like to read Dr. Park's paper, when, doubtless, I could (if I would) see "the air of originality with which it is clothed," etc.

Something relating directly or indirectly to the same subject has been written from time to time by such a number of operators that it would be almost impossible to mention the credit due each one of them. In reply to Dr. Park I will state that exactly the same method, or the "identical principle" that I practise and advocate now, could not have been "advocated and practised" in precisely the same manner twelve years ago, for the reasons that the rubber-dam was used but little and by very few at that time, and the dental engine and the electro-magnetic mallet were not in use twelve years ago, though the idea of these instruments was then conceived by the inventors. The dental engine and the electro-magnetic mallet were first exhibited at the American Dental Association ten years ago last August, at White Sulphur Springs, Va. Both a good dental engine and a well-adjusted electro-magnetic mallet, as well as the rubber-dam and various other appliances, are necessary to the proper performance of many (if not all) of the operations referred to in my paper. There are comparatively few even now who completely restore the contour of missing

tissue and have the teeth so closely knuckled-up to each other as to prevent the wedging of food between them.

In addition to what has just been mentioned there are facts stated in the paper in reference to histology which could not have been given in "this identical" manner twelve years ago, for the reason that they were not known at that time. Dr. Carl Heitzmann did not discover the net-like structure of protoplasm till 1873, and his pupil, Dr. Bödecker, did not extend the investigations so as to give us a description of the real minute structure of the dental tissues until about three years ago. MARSHALL H. WEBB.

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## TWENTY-FIRST ANNUAL SESSION OF THE AMERICAN DENTAL ASSOCIATION.

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HELD AT IRVING HALL, NEW YORK CITY, JULY 12TH, 13TH,  
14TH AND 15TH, 1881.

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### THIRD DAY—MORNING SESSION.

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#### DISCUSSION ON DENTAL CARIES.

DR. BÜDECKER said that the inquiry had been made, "What is Inflammation?" That was the old cry of forty years ago. At that time, when the doctrine was deemed to be the basis of pathological investigation, the blood vessels were considered the main disturbances in inflammatory process, and the blood furnished the substratum for the formation of pus. That doctrine was afterwards changed, and then it was said that the blood-vessels had nothing to do with the inflammatory process whatever. He would give them a short history of the formation of connective tissue. Without it they would hardly understand the pathological condition. He would take the formation of bone tissue. Bone tissue was organized from the embryo condition. In the majority of cases it was first transformed into cartilages, and was then formed into bone. If inflammation commenced, and they took out the lime salts, what had they? Nothing more or less than tissue. The cartilage was developed from the embryological condition.

Dr. ABBOTT remarked that he said on the previous day that the primary cause of decay in a tooth was the lime salts dissolving away, by which all the organic material of the tooth was exposed,

and they exposed then a portion of the living matter. The inflammatory process of the tooth was simply a returning of the tissue to its embryological condition—to its original condition. Whether they could absolutely explain what inflammation was, was a question. Swelling and pain are the indications of inflammation. If that is the case, how were they going to get inflammation in the bone that did not swell, or in the tooth that did not swell? The decay of the tooth is attributable to the decay of the lime salts. Irritation begins—irritation always precedes inflammation—and then the inflammatory action occurs. The inflammatory process passes down into the tooth toward the pulp, and, as it does so, the alkali are enlarged by the melting down of the tissue around. The living matter then breaks up into small particles. There is no attempt upon the part of the pulp to fill up and prevent decay going on. If a solution of lime salts has taken place, if the irritating cause is prevented, then that moment redeposition of the lime salts takes place.

Dr. BUCKINGHAM said that inflammation is a pathological condition, and only takes place in the living tissue, so there should be vitality to constitute inflammation. Now, they could take a piece of cartilage and cut it off, and it becomes dead. It cannot go through inflammation, but decomposition is what it goes through. Suppose tissue loses its vitality, what is the process of decay? Is there any difference? Why does not decay go on the same as before.

Dr. G. A. MILLS said—It is believed that living matter penetrates through the structure of the tooth, and inflammatory conditions are set up, which are called toothache. It is understood that inflammation causes a burning sensation. What produces the inflammation? What produces the burning?

Dr. MOORE, of South Carolina, wished to ask what was the cause of the liquefaction in the teeth of Irish emigrants after they had been in the country for a short time? In Southern countries they saw the same thing in the negro population. Where the negro was confined to the field, and where he procured his own diet in a very simple manner, his teeth were perfect; but when he was taken from the field and brought to the house, and received the living common to civilization, his teeth began to get bad in a very short space of time. He would like to hear some of the members express themselves upon that question.

The PRESIDENT said he wished to refer to the inquiry made by

Dr. Moore. It was a matter which had been observed by himself and by many others. Wherever there was a change of diet and mode of living there was often a marked change in the development of the teeth. When the negro was kept upon the plantation and subsisted upon the right kind of food, it was true his teeth were in a healthy condition; but when he was taken to the house, and lived upon the soft kind of food he received there, his teeth lost that condition—they lost the necessary stimulants to keep them healthy. The same thing applied to domestic animals. Mr. Bergh wrote him that cows lost their teeth and gums if fed upon slops. Their teeth lost their natural qualities. In eating certain kinds of food it was washed into the stomach, and there was very little for the teeth to do, hence the decay.

The meeting then adjourned.

#### AFTERNOON SESSION.

Dr. J. B. DAVENPORT's paper on the "Etiology of Chemical Abrasion of the Cutting-edges of the Front Teeth," which appears in this number of the MISCELLANY, was then discussed.

Dr. CHANDLER, of Boston, said he had listened with pleasure to Dr. Davenport's paper. As far as it went the paper was excellent, but he seemed to be on the wrong tack in speaking of spontaneous abrasion. He spoke of Dr. Harris, and referred it entirely to the breathing in of acids. He (Dr. Chandler) did not think much of Dr. Harris' explanation of it. He had among his patients two gentlemen who were manufacturers of acids. They were brothers. When they were young men they were put into the acid manufactory so that they might learn the business. Their teeth were very much affected in the manner described by Dr. Davenport. Harris' was a different thing. He had a patient, a clergyman, who had nothing to do with acids. He had another patient who was a bank cashier. Neither were in the habit of eating acids of any sort. The trouble had been in existence for five years. It was in the four front teeth. The canines did not seem to be affected. They would find similar trouble on the molars and bicuspid. These two cases were precisely what Dr. Harris described. It was the work of some acid. Where the acid came from he could not say. It was on the end of the tooth. The gums were not affected.

Dr. ATKINSON, of New York, said when they talked of spontaneous abrasion he would like anyone to define spontaneity. The



cases they had heard cited were not unusual ; he had seen a number of them. He had seen it in a number of instances upon bicuspid, molars, cuspids, but never upon incisors. Did they know that an acid did it at all ?

Dr. BARRETT said he had two patients—one was a young lady and the other was an old lady. He had seen a deep furrow extending up to the gums clear across the tooth so as to threaten the loss of the tooth. The old lady had a circular spot in the centre of each incisor. He filled it. Were these cases due to acids ?

Dr. CUSHING, Chicago, said a dead tooth never presented that condition. In the mouth of a patient of his every tooth was affected in that way except the central incisor.

Dr. W. H. HUNDENBURG said he had had a patient under his care for years. About two years' ago his teeth were put in order. One year after that he complained of great sensitiveness in the neighborhood of a tooth. He discovered that this breaking of the tooth-structure had occurred upon every tooth in his upper jaw, with the exception of two central incisors. It extended to such an extent that several teeth were nearly lost by it, and it occurred within a year's time. They were carefully examined before. He did not know how to account for it. The patient had very strong teeth.

Dr. BROCKWAY said that case corresponded with a case that came into his hands nine years' ago. A young man presented himself to him with nearly perfect teeth. On close examination he found abrasion round the necks of two bicuspid on both sides, and he ascertained it had been of very recent development. He questioned him as to his health, and he said that he was in good health, but recalling himself he said he did not know, that he had a little kidney trouble lately, for which he consulted a physician. That seemed to point to some explanation of his condition. He (Dr. Brockway) sent him to a physician he had confidence in, and he made a thorough examination of him and treated him for kidney trouble, and cured him. He (Dr. Brockway) then put his teeth in order by filling them with gold, and for two years there was no recurrence of the trouble. He had since lost sight of him.

Dr. WATERS said that about a year ago last October a sea captain came to his office to have his mouth attended to. He said he had known him (Dr. Waters) for twenty years, and was urged ten years ago to come and see him, and he would have saved a great many of the teeth. In his teeth decay had taken place beneath the gum.

The crowns of the teeth appeared healthy. He was a very large man, over six feet high, and had never been confined to his bed in his life, but he had been troubled with his water. He could not remain in the chair an hour at a time. It was difficult to operate upon him with gold, so he decided to use oxyphosphate, as he thought he could do more in the time. The pulp had gone almost entirely away. A year after the treatment the man came in with a tooth where a portion of the pulp had been removed, and the place of the dentine had been filled with oxyphosphate of zinc. Dr. Philebrown sent him a paper in which there was a statement of this man's teeth, and that his tooth was filled with arsenical paste. There was no amalgam in his tooth when Dr. Waters saw him. He wrote to Dr. Philebrown and told him how he (Dr. Waters) had treated him, and that the man had trouble with his kidneys. The question was, whether the kidneys or liver had anything to do with that case.

This subject was then passed.

### THIRD DAY—AFTERNOON SESSION.

Dr. Barrett's remarks on Anæsthesia were next discussed.

Dr. LITCH said he was glad to find that Dr. Barrett took the right view of nitrous oxide. He spoke of the extreme safety attached to its use, which he attributed to its weak potentiality. In this he might be in error. To him (Dr. Litch) it seemed that nitrous oxide is by no means weak. The anæsthesia produced by it is as complete as that caused by any other agent. With ether there is a slight circulation, relaxation, with loss of consciousness. With nitrous oxide, anæsthesia is complete in the second stage. Anæsthesia is produced more rapidly by it than by ether. He considered it as an anæsthetic to be quite as potent as ether or chloroform. The safety of it he attributed to the condition in which it is administered. Let them take opium or morphine and they could get quite a decided anæsthesia from its effects. Chloroform is a very heavy substance, and hence it is more dangerous. The patient does not eliminate the poison as quickly when chloroform is used as he does in the case of the others. In nitrous oxide it is eliminated in less than a minute. To this fact he attributed its freedom from danger, and not to its weak potentiality. He wished to call attention to a matter of great practical importance, and that was the extraordinary freedom from danger which had attended the use of nitrous oxide.

Statistics had shown that the administration of chloroform produced one death in twenty-seven hundred ; by ether, one death in twenty-eight thousand ; and one death in one hundred thousand came from the administration of nitrous oxide. A firm in Philadelphia had given nitrous oxide in one hundred thousand cases and there had not been one dangerous result.

Dr. BARRETT remarked that perhaps there was nothing definite in what he had said on the previous night to admit of extended debate, and yet there were some points he would like cleared up himself. He said that his own conclusions were that apparent immunity from danger in the administration of nitrous oxide was because of the lack of the potentiality in the gas itself. Professor Litch said that perhaps it might be due to its ready elimination from the blood. He rather questioned that, for as nitrous oxide is more soluble they would imagine the other anæsthetics would be more quickly eliminated. That was the brief point he desired to mention. He believed, therefore, that the immunity from danger in the use of nitrous oxide is due to its lack of potentiality. Nitrous oxide gas is a true anæsthetic, but its powers are so weak that all air should be excluded.

Dr. BUCKINGHAM, of Philadelphia, said every chemical compound is of different compositions. Nitrous oxide would act more rapidly than chloroform or ether. It was a most remarkable fact that they had three anæsthetics entirely different in compositions, yet they all acted in the same way. Did they act upon the nervous system or upon any special nerves ?

Dr. GEO. F. GRANT, of Boston, then read a paper on

#### DENTAL PROSTHESIS: ITS RELATION TO ARTICULATE SPEECH.

"Prosthetic dentistry," he said, "does not receive the careful consideration in all its details that it deserves from the profession at large, and it may be said that what is called the decline in this branch is not due so much to the introduction of cheaper materials as to the fact that the art as it has been practised has found its proper level in the hands and material of the men at whose door is laid the charge of its prostration. A change must come over the adaptation of artificial dentures, and there is reason to hope that Dental Prosthesis will soon occupy a higher plane in the estimation of the public as a result of higher achievement on the part of the dentist. The loss of the organs which dentists are called upon to replace is

of a serious nature, and produces effects which are of very grave importance. The voice is an important factor in the establishment of individual identity, and sometimes remains as the last feature of that identity. It is an undoubted fact that it is one of the first in importance of the various characteristics which mark the difference by which we determine identity. The changes which most directly follow the loss of the teeth and absorption of the alveoli take the **most immediate effect upon the speech.**

An approximate idea of the important part which the teeth have in the production of speech may be gained from a brief consideration of the changed relations of the other factors which are entailed by their loss. The absorption of the alveolus follows the removal of the teeth. The result of this combined misfortune is the removal of the support furnished the buccal walls and the lips, their consequent contraction diminishing the size of the oral cavity and obliterating whatever of resonating space existed between them and the lost parts. The tongue is deprived of much of its power by the loss of support it had received from the teeth. In fact the loss of a single tooth from either jaw will have an instantaneous effect upon the articulation. In the preparation of an artificial denture, intended to replace the lost organs, we are confounded by several obstacles which seem to be insurmountable, so far as the restoration of the original conditions to the production of correct and distinct articulation is concerned. We have to consider the adaptability of different materials to the purpose of retaining the teeth, and also the presentation of the minimum of obstruction to the free action of the tongue. In the construction of a plate designed to retain a few teeth in position a metallic base is the best of the metals. Gold is the best, from its ready adaptability. If the plate is supported by clasps, the greatest of care is needed to secure the relation between the plate and clasps that will insure a firm retention of the piece in close contact with the portion of the palate covered by it.

In general, the two styles of plates offer nearly the same amount of obstruction, practically because both of them occupy a large portion of the space within which the sounds mentioned are formed. The suction-plate extends farther back, but if properly made need not have more influence upon the articulation than the narrower plate supported by clasps. The best results, both for articulation and for the retention of the plate, are secured by placing the chamber in the centre of the roof, because whatever of



natural assistance to the two points under discussion is to be gained may be found there. A gentleman who is distinguished as an actor came to me for treatment of a perforation of the hard palate, which was of some considerable size. I made for him a plate of hard rubber, quite thin and large enough to cover the entire hard palate. On trial of it his spirits, which the loss of his voice had reduced to a low ebb, immediately rose upon finding his voice perfectly restored to him, and he immediately launched into a recitation of some length. I observed that some of his words were defective in finish. He said he had noticed the same thing, but thought the difficulty would disappear with a little practice. The plate was made so that the surface next the tongue was a perfect reproduction of the hard palate, except that I had polished it. As an experiment I roughened the surface of the anterior portion of the plate and tried it again. The result was so satisfactory to him that he refused to let me have it again, saying that it was perfect. Since that time I have adopted the plan of treating plates in that manner.

In the preparation of a denture for the full arch there are many new points which have to be considered, and in this view the introduction of plastic materials, or bases, has given us great benefit. If the roots of teeth can be retained in a healthy condition it is an important consideration, and would lessen the difficulty by one-half. The custom of preparing mouths for artificial dentures, as it is and has been practiced, has done us more injury than other things, and it is the practice of such methods that places this department upon the plane it occupies to-day. The work of dental prosthesis should begin immediately upon the loss of the teeth, and should be continued to the full accomplishment of its purpose. The rules which apply to the construction of partial plates have the same application in larger plates or full sets. But the chamber can in many cases be dispensed with, and wherever it is practicable it should be. This is an important item, and will enable us to make a plate of uniform thickness throughout that will have but slight effect upon speech. The crowns of the teeth should be as long and as nearly the shape of the natural crowns as is possible; indeed, this may seem a small point, but a very superficial study of the acoustics of the voice will convince one that it has an important bearing. The chief basis upon which the advancement of the operative branch of our art is founded is prophylaxis, and whether we divide our

specialty or not, the highest aim, the proudest achievement in our whole field of labor will be obtained through adherence to this principle in our methods.

*(To be continued.)*

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## NATIONAL DENTAL ASSOCIATION OF THE UNITED STATES OF AMERICA.

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HELD AT NEW YORK, AUGUST, 8TH, 9TH AND 10TH, 1881.

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### SECOND DAY—MORNING SESSION.

The following paper was read :

SINGULAR EXHIBITION OF INTERSTITIAL GROWTH OF TEETH, BY  
J. B. PATRICK.

We propose to engage the attention of the Association for a few moments in rehearsing the particulars of two singular observations made [by myself and son, apparently so rare that we have not met with any similar instance in the annals of dental science. They deserve to be placed on record, as they seem to contravene what is so well known of the development and nature of the several substances of a tooth, and are aptly fitted to open a discussion as interesting as instructive in the explanatory interpretations they suggest. The one occurred in my own practice some time ago, the other came to my son's knowledge recently, during his sojourn and practice in Beaufort, S. C., and has been carefully substantiated by most reliable authority.

*Case 1.*—Some years since Mr. J. B., a well-known merchant of Charleston, had the left superior central incisor filled with gold directly upon its anterior surface, a little beneath the neck. About three years afterward he called attention to the fact that the plug, while still firm in its place, had, to use his own expression, "grown down upon the surface," receding from the gum, and therefore more visible whenever the lip was raised in smiling or in speech. He was informed that a tooth could not grow, but as the doctor had no precise recollection of the original position of the filling, and believed the patient was mistaken, a diagrammatic outline of the tooth was made, and the actual position of the plug at that time was carefully indicated, and the patient was requested to call again in the course of time. At a subsequent examination some years

later, Dr. Patrick was surprised to find that there had been an obvious change in the position of the plug to a point about a line below that indicated and accurately fixed by admeasurement in the drawing, and singular to state there was no wearing away or attrition of the free border or cutting edge of the tooth. It proved to be a real and not an apparent alteration of position. A fact so clearly established and yet so difficult to explain could not but arrest attention. The necessary inference was, that should the process continue the filling would ultimately come to occupy the absolute edge of the tooth and grow out of it altogether. That event really took place, as the progression continued, until the gold fell out and no trace of the operation remained, except a slight indentation along the cutting edge of the tooth.

Another case of a somewhat similar nature had been communicated to Dr. Patrick's son. The patient was the daughter of a prominent officer of the navy, by whom the following statement of the case was made :

"When my daughter was about eleven years of age she had a front tooth filled by Dr. Northall, a partner of Dr. Foster, of New York City; the filling was of gold, and close up to the gum. In the course of ten or twelve years the tooth had grown down until the filling was on the edge of the tooth."

In attempting to account for such exceptional phenomena as occasionally present themselves, who shall limit the possibilities of that consummate workmanship of cells in the mysterious operations of repair? The difficulties in the instance of a tooth, however, and the inexplicable difficulty here presented, is the inorganic character of its structure. Were the teeth-bones traversed by blood-vessels, nerves, lymphatics—in other words, were the teeth highly organized—molecular depositions of new dentine would at once not only explain, but would actually foreshadow what might naturally ensue where a metallic substance like gold was embedded in the tissue. But it is wholly otherwise with dentine. Though organic in its origin, dentine in the human subject is not organized; therefore, it neither grows, inflames, nor undergoes repair; and whether burned, bored, broken or filed away is never reproduced. The researches of Professor Owen have demonstrated that dentine presents itself in the various classes of mammals in four distinct modifications, to which he has applied the terms unvascular dentine, vaso-dentine, vitreo-dentine and osteo-dentine. The first only is supposed to

exist in man. To what extent human dentine may become abnormally modified within perfectly healthy conditions we know literally nothing. Theoretically, there is no reason why modifications of structure may not be found reproduced in the human species, especially such as we know to obtain at an early period of the sacular stage of development. Why, for example, under very extraordinary and peculiar circumstances, may not some few of the capillary tracts of the formative vascular pulp remain uncalcified, perpetuating in the subsequent permanent tooth the embryonal stage of a vaso-dentine tissue? Under such a condition, molecular changes of an interstitial nature would constitute a very slow growth, similar in kind, though very different in degree, to that which is well known to occur in the incisors of rodentia. With this difference, again, that in the rodent the tooth grows as a whole from the base, whereas, in the case theoretically suggested, a segregated tract of interstitial molecules would alone undergo growth, and the progressive displacement of a foreign body would continue to advance until this was entirely expelled. Again, at a very early period of its evolution the crown, as well as the roots of a tooth, is surrounded by a thin layer of cement—*crusta petrosa*—the part of all others which most resembles bone in structure. It is possible that should such a layer of cement continue *abnormally* to invest the crown in any appreciable quantity, the presence in the layer of a foreign particle of gold might excite a somewhat active reproduction of the tissue in its neighborhood, which would, in like manner, produce the phenomenon mentioned.

Such, then, are the hypothetical speculations which these interesting and rare observations have suggested, and they are offered as the only two modes of accounting for the possibility of such exceptional instances.

Dr. FRANK ABBOTT could not see how it was possible that such a thing could occur. Enamel does not change its position or its structure after it is once formed, except to become more perfect in its solidity from a better disposition of lime-salts. It must wear off at the end of the tooth in order to produce a change in the position of a filling, in his opinion. The pushing back of the gum by brushing or by any irritation might give the appearance of such a change.

Dr. J. R. WALKER had a case in one of his children, a boy now fourteen years old, which presented a similar appearance to that described by Dr. Patrick. When the child was nine months old



he noticed a yellow, softened spot in the labial surface of the left upper central, indicating the speedy destruction of the tooth. At eleven months he inserted an amalgam filling, as the tooth was too soft for gold. At four years, while there had been some wear of the cutting-edge, there was an appearance as though the filling had moved. He thinks that to the superficial observer the natural wear from attrition and the recession of the gums might cause such an appearance.

Dr. ABBOTT—The tooth is as much organic in its composition as a bone or a muscle, and is composed in its basis-substance of the same material—the connective-tissue—but the filling matter differs in the amount of lime-salts contained. We can get repair of a tooth just the same as of any other tissue, if we only know just what to do to cause it. We are all the time experimenting to find out what will cause it. Sometimes we get this repair accidentally. We get it sometimes under a gold filling. We get it where a tooth is ground off by attrition—the surface of the dentine becomes hard and polished. We get it by deposition of the lime-salts in the pulp-canal, until, if a man were to live long enough, the whole canal would be filled up; but there would still be a little life in the canaliculi, permeating the whole structure of the tooth. In secondary dentine, or where the deposits are made under extraordinary circumstances, as excessive irritation, we have a stronger deposition, and the canaliculi do not have their usual peculiar wavy appearance, and are not so numerous, so that the dentine so formed is denser than the ordinary dentine. So far as the organic structure of the tooth is concerned, he believed that was admitted. The sensitiveness of a cavity, caused by cutting the dentine, is simply caused by cutting into the living matter. This is more noticeable at the neck of a tooth, because there we find the greatest amount of life; we get also the most pain. He had seen many cases of secondary dentine, but never a case where a filling was dislodged by the growth of a tooth. He had seen cases where the filling dropped out from wear of the tooth at the edges, and in a few months the constant brushing causes the gum to recede, giving the appearance noted, but he cannot understand how Dr. Patrick's case occurred. The living matter runs through the tooth, permeates it in every possible way, the same as it permeates the hand or any other part of the body; the hand was composed partly of living matter and partly of inorganic. The cell theory is pretty well exploded, in his opinion, and

it is now conceded that Carl Heitzmann has established the fact that there is a connection between the masses of living matter, which pervades every portion of our bodies.

Dr. T. L. BUCKINGHAM, Philadelphia, asked Dr. Abbott if the dentine of a tooth which had been broken could reunite. In the college museum there is a specimen in which a tooth was broken and reunited. If this can be there must be a healing process going on between the parts. In the case presented he cannot see how it is possible for the enamel to push down the filling unless the tooth is worn at the end. The circulation in the dentine goes through it in every direction, and in that process the lime-salts are deposited. If you put it into hydrochloric acid you take out the mineral constituents and leave it nearly like cartilage. According to Beale, there are two forms in organized matter—formed matter and germinal matter. Formed material has not the power to produce tissue; that is the province of germinal matter. We all know that when the enamel is worn off, the surface of the dentine which is exposed is as hard as the enamel. Twenty years ago the same dentine might have been cut, and it would have been found quite soft, comparatively. Now, the question is, can the lime-salts be redeposited in such a way as to fill a cavity. Such an event would happen in bone; why not in tooth?

Dr. ODELL—Dr. Abbott says some parts of the body have no life; and then, again, that all parts are pervaded by the living matter, which is a contradiction in terms.

Dr. ABBOTT, replying to Dr. Odell, said we know that there is no life in lime-salts, because it is inorganic. If we took even a section of nerve we could not say it was all alive; a certain portion would be alive and a certain portion not. It would be impossible to touch any portion of the hand with a needle-point without touching the living matter. Certain parts of the structure have one function; other parts have other offices. Take the amœbæ, for instance, looked at with a high power, the network of living matter will be seen filled with water<sup>†</sup> or some fluid, but there is no life in the fluid. That is the condition in any protoplasmic body before the materials are properly disposed for the performance of function.

Dr. BUCKINGHAM—This question of life is one of the most difficult with which we have to deal. He could not agree that some portions have life and some have not. To say that a portion of the structure is dead, and yet performs functions, is strange. He

doubted that lime-salts have no part in life. You cannot destroy a portion of muscle, or blood, or bone, without destroying a portion of this which you call inorganic material. Sensation is carried by the nerves just as electricity is carried by the wires. He had no doubt that sensation is inherent in all matter.

Dr. ABBOTT—By the living matter is meant that which has the power of reproduction or of motion. That is the only way in which it can be defined. A large portion of the human frame is water. No one will claim that this has life; at least there is no way of discovering life in it. He could not understand how Dr. Buckingham could think there is life in lime-salts.

The meeting then adjourned.

*(To be continued.)*

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#### FIRST DISTRICT DENTAL SOCIETY OF THE STATE OF NEW YORK.

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A MEETING of this society was held on Tuesday evening, October 4th, at the S. S. White's Dental Manufacturing Company's rooms, corner Broadway and Thirty-second street, New York. The subject for consideration was "Causes and Prevention of Recession of the Gums." It was the first meeting of the season and there was a good attendance.

A letter of resignation was read from Dr. G. W. WELD, the Secretary, which was accepted, the thanks of the society being tendered to Dr. Weld for the way in which he had discharged his duties.

#### THE CLINIC.

Dr. BÖDECKER said that they had a very small clinic that day. Dr. E. PARMLY BROWN demonstrated to them the use of his rubber dam clamp, and first applied it to the left lower third molar in which he filled the grinding surface, beginning with his own mallet and finishing with the electro-magnetic. Second, he filled the left upper canine labial surface near the gum, also applying his new clamp.

#### EUROPEAN EXPERIENCES.

Dr. JNO. ALLEN said he would very much like to hear a report from the great meeting held in London, at which several of their

members were present. If the President would consent he was sure they would be all very glad to hear something from him about that meeting.

Dr. ATKINSON said it afforded him great pleasure to stand before them that night, and he wished he had the ability to communicate to them the manifold experiences he had passed through since last he left them. It was a matter of astonishment to see how their (the Americans) names were known on the other side of the water. As far as kindness and hospitality were concerned nothing could be more complete or satisfactory than the manner in which they were treated in Europe; but to men who went there with the expectation of being advanced scientifically, if all their experience was the same as his was, that matter would have to turn up under the head of disappointment. They had a magnificent gathering of some three thousand members, that was actuated more rigidly by rules and regulations and old-fogy methods than their American Associations labored under. It would not do to compare that body for freedom with the American Medical Association, and could not for a moment compare with the American Dental Association, the highest body on the Continent for freedom of speech. It was not, however, a proper moment for him to go into the details of that meeting in London. If one advanced any discovery that was beyond their day or in advance of their recognition, they had in England a very smooth way of ignoring one. Those who had got a report of the proceedings of the body in London would be able to go through the details. They had some clinics there, but the best portion of their best men would not compare with the American fourth-rate men. Their best finishings were bad; they were like the old finishings, and how so intelligent a body as the English public could put up with it was a marvel to him. In surgery they had magnificent displays of old-fogyisms. They were as much behind as the Americans were thirty-years ago. They had a very fair representation of Germans. They understood something about molecular change. But not an Englishman nor a Frenchman who opened his mouth could give one to understand he knew anything about molecular change. The mass of the English dentists were just outside of the court circle.

The speaker here referred to his reception by the President of the Odontological Society, of whom he spoke in very high terms. He next gave a disquisition upon the Tower of London. He did



not see anything attractive in it, it being a relic of the murderous exercise of war.

Dr. E. PARMLY BROWN said he was treated magnificently in London. They were not, in London, up to the mark in operative dentistry. They were not equal to the American dentists. They were twenty-five years behind the age in operative dentistry. They wanted in England, however, to learn, and if they had some good operators there they would soon learn. The American operators in London retrograded—they went back after being there some time. It required a good dentist indeed to go over there and go ahead of the prejudices of the country. The second day's clinic was the American dentists' clinic. The English dentists got very much interested in it. They were, in fact, surprised, and he would not be astonished if they had a lot of them over here to learn. One of the dentists there spoke about a clinic duel at the Dental Manufacturing Company's depot. Dr. Webb had arranged a match, but was taken sick. They, however, met at the Company's depot. Dr. Thompson, who was one of the best, commenced a contour operation of the superior central incisor, the pulp alive. His (Dr. Brown's) friends wanted him to operate. Dr. Thompson commenced his operation at three o'clock, and he (Dr. Brown) got his under way at five o'clock. While Dr. Thompson was finishing his operation the speaker went over to look and he found that he could not put a finish upon it. He laid on half gold after filling it up, but he did not get it in order even then. One of the professors proposed Dr. Campbell and the speaker to give a clinic, and said that perhaps they would get some others to join them. They telegraphed them (the Americans) at Paris that they had twenty-five to join in the clinic and that they contributed \$500 to pay expenses. So they went back to London and spent a week clinicng. They were as fine professional gentlemen as he (the speaker) ever met in his life. They attended the clinics from an early hour until late at night, and these gentlemen were from Scotland and England. They paid their money to learn. He (Dr. Brown) enjoyed the seven days' clinic very much.

Dr. ATKINSON said there was an old confrere of his, Dr. C. H. Harrown, of Toledo, Ohio, present who might have something to say.

Dr. HARROWN said he had been very much interested in the remarks make by Dr. Atkinson of the results of his voyage over the

sea. A number of their Ohio brethren also went across with the others. The dental profession in the United States, he was proud to learn that night, stood beyond those whom he might call their fathers upon the other side of the ocean. For a number of years past they of the West believed that the American dentists were actually far ahead of any other nation. In the far West they were endeavoring to make the profession of dentistry what they wished it to be. Men were looking for higher attainments, something better, something brighter. They were growing rapidly. They were not behind. They were doing all they could, too, for the young men who were starting in the profession.

Dr. W. T. LA ROCHE admitted that some of the dentists in Europe were a little behind in operations, but he believed they had some good reasons for not being as good operators as the dentists in America. They had better materials to work from in America, and that was one reason he thought why the English were behind.

Dr. OSCAR JOHNSON then read a paper giving a general *resume* of his experience in dentistry.

Dr. M. L. RHEIN was elected Secretary in the place of Dr. Weld. The meeting then adjourned.

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## CONNECTICUT VALLEY DENTAL ASSOCIATION.

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A NEW constitution and by-laws was adopted by this society at its eighteenth annual meeting, held October 27th and 28th. Valuable papers were presented by Professor Charles Mayr and by Dr. C. W. Strang. Reports of interesting cases were made by Professor L. D. Shepard and by Dr. L. C. Taylor.

It was voted that unless the Executive Committee decide upon having a union meeting with the Merrimac Valley Dental Society, the semi-annual meeting would be held at Amherst, Mass.;

Following is the list of officers elected and appointed for the ensuing year: President, C. Fones, Bridgeport, Conn.; First Vice-President, N. Morgan, Springfield, Mass.; Second Vice-President, O. F. Harris, Worcester, Mass.; Secretary, A. M. Ross, Chicopee, Mass.; Treasurer, W. H. Jones, Northampton, Mass.; Executive Committee, C. T. Stockwell, Springfield, Mass.; J. J. Vincent, Amherst, Mass.; C. W. Strang, Bridgeport, Conn.

A. M. Ross, *Secretary.*

THE CALIFORNIA DENTAL COLLEGE.

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An adjourned quarterly meeting of the Board of University Regents was held at San Francisco on the 7th of September.

Dr. Stebbins presented the report of the Visitation Committee on the matter of the proposed Dental College, in which the Committee submitted the following plan of organization: First—That a Dental Department be established in connection with the Medical Department of the University, and that the same be organized with a Professor of the Principles and Practice of Operative Dentistry, a Professor of Dental Art and Mechanism, a Professor of Dental Pathology and Therapeutics, a Professor of Physiology, a Professor of Chemistry, a Professor of Anatomy and a Professor of Surgery.

Second—That all the Chairs be filled upon the recommendation of the Medical Faculty, subject to the approval of the Board of Regents.

Third—That the appointment of all demonstrators and chemical assistants be left entirely with the Dental Faculty.

The Committee also recommended concurrence in the following recommendations of the Medical Faculty, viz.: That S. W. Dennis, M.D., D.D.S., be appointed Professor of Principles and Practice of Operative Dentistry; that A. E. McLain, M.D., D.D.S., be appointed Professor of Dental Pathology and Therapeutics; that C. L. Goddard, A.M., D.D.S., be appointed Professor of Dental Art and Mechanism; that M. W. Fish, M.D., be appointed Professor of Physiology; that A. W. Perry, M.D., be appointed Professor of Chemistry; that Wm. Leavitt, M.D., be appointed Professor of Anatomy, and that W. E. Taylor, M.D., be appointed Professor of Surgery.

The report was adopted.

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A HANDSOME CARVING.—Dr. T. S. Hitchcock, of 125 West Forty-second street, N. Y., sends to the MISCELLANY a very handsome carving of a set of teeth in wood. Two of the teeth are plugged, and the whole work is very nicely done, exhibiting great skill on the part of the doctor as an operator.

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To protest against wrong is the right of every one.

## AMERICAN ACADEMY OF DENTAL SCIENCE.

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At the fourteenth annual meeting of the above organization, held in Boston on October 26th, 1881, the following resolutions were unanimously adopted :

*Resolved*, That the American Academy of Dental Science have received with sincere sorrow the intelligence of the death of their late associate, Dr. Daniel Harwood, one of the oldest honorary members, and formerly President, of this Society. He departed this life on Sunday, October 2d, 1881, in the 81st year of his age.

*Resolved*, That by the decease of Dr. Harwood, whose professional career extended through a period of more than half a century, we add another honored and illustrious name to the catalogue of distinguished members of the dental profession who have finished their earthly labors and passed on to the land of rest and immortality. He was one of the first in our country to take a high stand in the practice of his profession. He was unmistakably a man of energy and talent, courage and fidelity. The designs of his operations have always evinced good, strong, practical common-sense, and their execution has demonstrated an honest determination to do the best for his patients possible.

*Resolved*, That the example of Dr. Harwood has done much to stimulate young men to put forth their best exertions, and few indeed will leave behind them so good a record as he. Although his departure will be deeply felt, yet we should be thankful that he was spared so long, and that in his declining years he had the satisfaction of seeing his profession advancing nearer the ideal that he and others reared for it in other days.

*Resolved*, That a copy of these resolutions be sent to the family of Dr. Harwood as an expression of our sympathy in their great bereavement.

*Resolved*, That a copy be entered upon the records of the Academy, and also that copies be sent to the dental and medical journals for publication.

ELISHA G. TUCKER, }  
EDWARD P. HARRIS, } *Committee.*  
GEO. T. MOFFATT, }

JACOB L. WILLIAMS, *President.*

JOHN T. CODMAN, *Recording Secretary.*



## EDITORIAL NOTES.

## THE COMING DENTIST.

THE coming dentist—what is he to be? How much will he be in advance of the dentist of to-day? There is much to consider in answering these questions. The man is the measure of the dentist. This is true in many ways; true in all ways. Given a man who is a man—diligent, honest, active, intelligent, progressive, and you have a dentist, diligent, honest, active, intelligent, progressive. Given a man idle, dishonest, unintelligent, stagnant, and you have a dentist (if he becomes one) possessing these qualities. The curriculum of a dental college does not make an idle man industrious. There is no provision in it for that. What a man is when he goes into college he is when he comes out. The man who enters the profession for the purpose solely of acquiring wealth and position will evince that purpose all through his career.

The college professors are “quarreling and contending” with the dentists of the country. (The words we quote are from a paper by Professor Hodgkin, read before the Southern Dental Association, although, of course, the words must be interpreted in their mildest form.) “You send us unprepared men,” he says. He complains that a great many of the students are “poor fellows, whose knowledge of even spelling and reading and writing is so limited we are obliged to simplify, and simplify, and simplify, until simplification is wearisome to teacher and advanced students.” Then the professor pleads for cultured men—men who have been instructed in the first principles of education.

However much of a pessimist a man may be, he has to admit that things are looking much better than they were. The standard of dentistry is nowhere in the world rising as it is in this country; but the turning over of the soil which has been commenced during the past few years has only revealed to sight how much there is to do to clear it. The tasks lying before the teachers in our colleges are prodigious, if they do their duty. The future of the profession lies with them. It also lies in a great measure with those practicing dentists who do all they can to discourage those men from entering the profession who would always be fumbler, and who do all they can to encourage those who are intelligent and active, and who would be successful at anything. The pith of the matter lies in these two affirmations: We don't want men who are unlikely to be

successful at any trade or profession they may turn their attention to ; we do want those men of whom it can be said that whatever they do in life they will be successful—that wherever they are they will mold circumstances, and not be drifted about from pillar to post *by* circumstances.

#### WHAT WE WANT.

This nineteenth century is pre-eminently an age of truth seeking, scientific research and truth telling. There is as much discovered in a year now as would be discovered in a century of youthful England's life. Men lay themselves open to find out new things. The introduction of machinery has done much to make hills and holes in society. Whereas, in primitive times nearly all the population was compelled to till the soil to produce sufficient food for its use ; now the introduction of labor-saving machinery has set free the brains of men to bask at their own sweet will among the vast problems which are laid bare by the microscope. Science is the fashion nowadays. Unlike most fashions it cannot fade and die. Truth is eternal and science is truth.

Among these truth-seekers are to be numbered a great many dentists, who are doing much to secure the foundations of the profession. They are delving into vastnesses revealed by the microscope, if we may be pardoned the paradox. But the few leading dentists of the world, whose names are synonymous for all research and valuable information on all subjects pertaining to the profession, are but the vanguard. In other words, the smaller men who come behind must not do as *Géorge Eliot* says the society of to-day does—"Let Faraday provide for it its science." No ; the dentist must follow. He must not take on trust what the big men say. He must investigate for himself—must tread the same path, although with easier step for its having been trodden before. Dentistry must be regarded as a scientific calling. To regard it as other than this will, in the future more even than now, be to court defeat and failure. Assurance and cheek will not avail. They must be backed up by sterling knowledge.

#### ENGLISH DENTISTRY.

The American dentists who have been visiting England lately, in connection with the International Congress, were very hospitably treated, but this fact is not discouraging them in expressing their views regarding English dentistry. Neither should it. But before

going a very long way with denunciation of things English, it would be well to remember that a week or two's residence in London would not give a man an opportunity to grasp all that the English know. In some directions they have gone a long way ahead, in others they have lagged. But then the Englishman who comes to New York for a visit, if he is an average man, sees only our bad streets, our gaunt telegraph poles and shabby docks. So if in American dental journals for a year or two to come our English friends see an effervescence of disgust at their insular prejudices and conservatism, they must try to forgive us.

#### MORE IGNORANCE

Among the duties of the dentist is the work of instructing the people. This is a stupendous task. The masses possess illimitable capacity for instruction. To inform one man that dentists do not exist to pull teeth is not at all times an easy task. How much more is it difficult to instruct fifty millions of people? We have stated on former occasions our impressions regarding this duty of dentists, and we repeat it because of its paramount importance. Life is not worth living if we do not seek sometimes to benefit our neighbors by a little gratuitous instruction, and the average dentist feels this.

We are led to these remarks from the perusal of an article in a prominent New England newspaper, where a writer, evidently a reporter, seeks to enlighten his readers somewhat on the subject of dentistry. It is clear enough that this reporter's mind is obfuscated by the idea that a dentist exists to pull out teeth. That is what he is made for. That is for what he lives. All this reporter talks about is pulling teeth, forceps, anesthetics and artificial teeth. The article referred to had a circulation of nearly fifty thousand, and in so far as it was read exerted an influence.

A traveler across this continent from East to West is impressed with the abundance of soil which is not under cultivation, and the still larger quantity which is not cultivated to its fullest extent. But he does not grieve. He remembers that this soil is doing itself no harm by laying unimproved, but that when it is taken in hand it will reward the pioneer all the more for having lain idle so long. How different is the feeling of the philanthropist as he gazes out on the uncultivated mass of humanity. The dentist is among these philanthropists. He cannot but feel that thousands of lives which are, perhaps, valuable to the world are being shortened, directly or

indirectly, by ignorance of the first principles of dental science—by the belief that dentistry is the art of pulling teeth.

The rising generation should be taken in hand by the dentist. The adult population of the land is too unreceptive in its mind to accept the—to them—new doctrine, that dentists are not machinists. Much cannot be hoped to be accomplished with men who are past twenty years of age. It is the children who will willingly listen to what the philanthropic dentist has to say. The subject is of great interest, and the dentists who undertake in their own way to instruct the young will reap ample reward in many ways.

#### DENTISTS' DUTIES.

What is the duty of a physician? What is the duty of a dentist? Should the one refrain from giving medicine to his patient and give him advice only when advice alone is needed? Should the dentist, after having filled the teeth of a patient, give minute advice and counsel as to the every-day treatment necessary to keep them in order, with rules as to diet also? Should he exert every effort to ensure the mother to so regulate her life and that of her children so that they may suffer the minimum from defective teeth? To follow the course suggested by unselfishness may involve loss of dollars to the dentist. It has been suggested that the arrangement would be a good one for families to pay their doctor so much a year to keep them in health. If this would actually prove beneficial in practice, so undoubtedly would a similar arrangement made between the family and its dentist.

When we come to actual practice there can scarcely be two opinions as to what the dentist's duty is in such cases as we have supposed. It is rarely that he shrinks from it. Did the reader ever think out for himself the relations which subsist between altruistic and egoistic motives—the motive which prompts a man to think of the good of others and that which tells him to regard only himself? Philosophers demonstrate without question that social life could not exist except by a mixture of these motives. If all men were to follow the command to "live for others" the world would come to a standstill. The motive-power of business and general activity would be gone and stagnation would result. On the other hand, if the tendency, which is happily seen all around us, of recognizing our duty to our neighbor were extinguished, and if we followed egoism



solely—that is, cared only for ourselves—then family life and love and friendship would go and the social fabric would totter and fall.

The dentist or physician who studies in order that he may become proficient in his calling is egoistic so far as he studies to secure his own happiness and comfort. On the other hand, he is altruistic so far as he studies in order that he may alleviate and prevent the pains of his fellows. A good man's conscience is an almost unerring guide as to when and how he should give his knowledge and services from an altruistic motive.

#### A FLING AT AMERICAN DENTISTRY.

It will be remembered that Mlle. Bernhardt was accompanied on her late tour in this country by one Mlle. Marie Colombier. This latter has just published, in Paris, her impressions of the United States. Speaking of Clara Morris, the actress, Mlle. Colombier, says: "Her mouth is a black hole. Her teeth look like cloves stuck in sealing wax. And people pretend that America is the country of dentists!" We quote this passage, couched as it is in language that is not by any means of the most elegant character, for it is well for us to see ourselves as others see us. At the same time we may be justified in concluding that Mlle. Colombier's spleen was aggravated by the public applause Bernhardt got, not a little bit even being reserved for herself. Now it will be in order to hear what Bernhardt has to say about American dentistry.

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#### PEEPS INTO THE MAGAZINES.

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BY "ALERT."

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THE report of the Southern Dental Association, as given in the current number of the *American Journal of Dental Science*, is full of interest. A great many exceedingly suggestive things were said at the meeting. Some of them dealt, it is true, with somewhat trite subjects, but after all the commonest questions now before the dental public are common, simply because everybody is talking about them and is interested in them. There is a great deal in the address of the President, Dr. V. E. Turner, which we must refer the reader to as valuable. There is much in this address concerning the duty of the dentist to the public in diffusing knowledge that is worthy of

Dr. Turner, and shows that he has a right conception of a dentist's work. The "recognition" idea is handled, and the good and the weak points of those who are pining for crumbs from the medical profession's table, are shown up in detail. Prof. Hodgkin, in a paper on "Dental Education," strikes a new side of the question; he pleads for a better class of students. "Comparatively few have good common school education"—that is, of those who are sent to the dental college with which he is connected. In his remarks on plastic fillings, Dr. Winkler says that he had for a number of years been seeking to find a filling with which an unskillful man could save a tooth as well as the best dentist. On his being taken to task by Prof. Hodgkin, the doctor replied that he "was looking for a filling which would enable comparatively inexperienced young men to save teeth, at present lost by their being poor manipulators." It is a question if the doctor is to be complimented for his diligence in making such a search. The case stands at present thus—teeth filled by inexperienced men are not saved. The natural result of this is to drive "poor manipulators" and men who are a disgrace to the profession out of the ranks. It is desirable that such a result should follow. If, however, these inexperienced men are going to be able to fill teeth with a plastic that will save the teeth "as well as the best dentist," then experience will be discounted. We do not think the doctor will find such a plastic, so there is not much to fear. The laws of chemistry forbid it. Apart, however, from the possibility of his being successful in his search, we hope, for the sake of dentistry, that he will not.

Concerning dental education, a variety of opinions exist. An evidence of this is given in an article by Dr. Joseph Richardson, in the current number of the *Missouri Dental Journal*. Dr. Taft, who apparently indorses the action of the American Dental Association on the matter, has been taking to task those colleges which promise graduation to students "upon attending one course of lectures." The Indiana Dental College, with the faculty of which Dr. Richardson is associated, provides that a student may take the degree at the close of a single session, if found worthy to receive it on examination. "Qualification and not a multiplication of lecture courses constitutes the test of worthiness." Dr. Richardson calls the attention of his readers to a resolution passed by the Southern Dental Association at their late session, in which its members "indorse heartily the doctrine that a diploma from a dental college

should be awarded to merit and merit alone, irrespective of the number of years of previous study." Further on Dr. Richardson complains unsparingly to the American Dental Association for its "offensive resolution" and "proscriptive intolerance that does perpetual violence to the essence and spirit of its own code of ethics."

Dr. Edgar Park also criticises in the *Missouri Dental Journal* Dr. Webb's article which appeared in the MISCELLANY for September, in a letter similar to that which was published in last month's MISCELLANY. The editor also prints after Dr. Park's letter an article which appeared in his journal in 1871 on the same subject of "Contour Fillings." This is done for the purpose of showing that there is nothing original in Dr. Webb's method.

In the *Popular Science Monthly* for November, in the usual contribution by Dr. Felix Oswald, under the head of "Physical Education," there are some wise remarks on the teeth. He speaks of a crust of bread as the finest dentrifice, and points out the desirability of finding work for the teeth to do. There is no doubt that much of the decay of teeth is to be traced to the idleness which they are compelled to. Any organ which is intended for work and which is habitually allowed to remain idle will become useless in time. If the teeth have hard work given them they will under favorable circumstances do it. If, however, they have no work to do—if a person lives on food which is pulpy and needs no mastication—they lose their strength. The intricacies of this question are worth looking into and following up by the dentist who wants to understand the causation of caries.

In the *Dental Office and Laboratory*, Dr. T. F. Chupein makes some practical remarks on the care of the dentist's hands. Everybody knows more or less of the trouble those members of the profession experience who do mechanical work, with the chapping of the skin and the cracking of the flesh. Dr. Chupein says he has found an infallible remedy. This is the recipe in his own words: "To one pound of pure glycerine I add two ounces of rose water, shaking these together until well mixed. On my washstand, in both office and laboratory, I keep a small toy pitcher that will hold about an ounce of the above mixture, and every time I wash my hands, before wiping them, I pour into the palm of one hand a few drops of this glycerine. I rub this over both hands, as one would do in the act of soaping them, and then wipe them dry. I would impress, however, on those who wish to try it, that it must be done

*unremittingly.* If the hands are washed fifty or one hundred times a day, fifty or one hundred applications of the remedy must be applied, and it is for this reason that I keep a small vessel containing it in both office and laboratory, as also on my chamber wash-stand. I have noticed, also, that my hands are kept remarkably clean. Whether the remedy has any detergent effect I know not, but I have noticed that the wax and oil from the laboratory, which adheres so persistently to the skin of the fingers, have to a great degree disappeared from these places."

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## DENTISTS FOR THE ARMY AND NAVY.

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ABOUT the year 1850, says the *New York Times*, the subject of appointing dentists in the Army and Navy was first brought forward in this country. About this date the question was also agitated in France and England, but in America only the matter has been given the prominence and character to which those interested claim it is entitled. It was not until 1861 that the American Dental Convention appointed a committee to urge the Government to take the matter under consideration. In 1868 a bill calling for the appointment of dentists in both branches of the National service was laid before Congress by Senator Hamlin, of Maine. This was, in reality, the first effort of consequence made; but despite a strong exertion on the part of the advocates of the reform to get the bill through, it was referred to the Committee on Naval and Military Affairs, from whom it received only passing notice.

During the Forty-second Congress a second bill was presented by the Hon. Dewitt Townsend, advocating dental appointments to the Military and Naval Academies, but, as in the previous instance, it was passed over to the committee, who gave it little or no consideration. A dentist has been appointed to the Naval Academy at Annapolis, with the rank of Assistant-Surgeon, and this is really the only movement the Government has made favorable to appointments of the character referred to. President Lincoln favored the movement, and many dentists of standing and eminent physicians consider it worthy of their support.

Lieutenant H. Whiting, of the United States Marine Corps, expressed himself as follows regarding the subject to a reporter: "I consider the appointment of surgeons who possess a thorough knowl-



edge of dentistry a necessity, and I believe the Government should, and will before long, take decided steps toward that end. Nowhere is the want of dental treatment experienced more than on board training ships and seagoing vessels—particularly at foreign stations—and in most cases the only remedy resorted to for an aching tooth is the forceps; hence many valuable teeth are sacrificed in the absence of proper dental treatment and other and more serious disorders often follow. From men now in my command who have served in the army I have learned that the same state of affairs exists at the military posts in the Far West. I am fully convinced that much suffering is experienced by soldiers and sailors from the lack of proper treatment of diseases of the teeth. Sound teeth constitute one of the physical requirements of men entering the service, and it is but right that the Government should bestow upon its servants the care necessary to protect their health. Neither soldiers nor sailors can afford, from their limited remuneration, to pay for dental treatment, and it is unjust that a man entering the service with sound teeth should lose them for want of proper care during the term of his enlistment."

Lieutenant-Commander Heyerman, Executive Officer of the receiving ship "Colorado," said to the writer: "I am decidedly in favor of the appointment of surgeons in the navy who possess a knowledge of dentistry. The care of the teeth of sailors is a matter worthy of consideration, and I am greatly in favor of the movement."

In 1858 the Chief of the Medical Staff of the French Army, Baron Larrey, issued an order calling the attention of officers to the condition of the teeth of soldiers, and suggesting that something should be done to preserve them from decay and loss; and about the same period General Sir De Lacy Evans endeavored to interest the British Government in the same subject, and at his instigation a circular was distributed among regimental surgeons reminding them of the value of soldiers' teeth. As they were not supplied with the requisite instruments, and in most cases had little or no knowledge of dentistry, the effort was attended with but slight beneficial results.

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It is pleasing to find that our English friends are forming branch organizations of the British Dental Association.

## CASE OF SUCCESSFUL REIMPLANTATION.

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BY EDWARD FOTHERGILL, L.D.S., NEWCASTLE, ENG.

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ON June 2d, 1880, the Rev. B——, a young clergyman, brought to me his second superior left molar, which had been extracted by mistake. He had been suffering pain in the first molar adjoining, but his medical adviser, under a misapprehension, had removed the wrong tooth; on learning his mistake he suggested that I should replace it. Mr. B—— reached me about an hour afterward, with the tooth in his waistcoat pocket.

There was a small defective gold stopping in the crown; this I removed, drilling through to the pulp-chamber and extracted the pulp. After applying carbolic acid to the nerve canals, and refilling the cavity, I shortened the fangs, and with a firm pressure re-inserted the tooth, which needed no ligature to retain it. A week after I again saw the patient; he had but little pain; the tooth was firm, but there was a small sinus opening from the palatine root.

November 1st, 1880, Mr. B—— called. The appearance of the tooth and gum was normal, and he could use it with as much comfort as any other; it was, in fact, as firm as before.—*Journal of the British Dental Association.*

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## DEATH FROM SWALLOWING ARTIFICIAL TEETH.

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A CASE which lately came before Mr. H. C. Yates, the coroner for Sandbach, England, is rightly stigmatized by the local journals as "extraordinary," albeit that the facts are of a very ordinary kind. On the night of April 9th a Mrs. Froggatt, aged eighty-two, having been undressed by her servant in the presence of the servant's little daughter, bolted her bedroom door on the inside and retired to bed. The next morning she did not ring as usual, and when called failed to answer. The servant, in the presence of her daughter and another woman, then broke in a panel of the door, drew back the bolt, entered the room and found Mrs. Froggatt dead. The medical man who was called in testified, in effect, that deceased had probably been convulsed at the moment of death, and searching for the cause he had found a set of twelve false teeth, which she had forgotten to remove when she went to bed, jammed into the lower part of the pharynx and obstructing the larynx. The medical

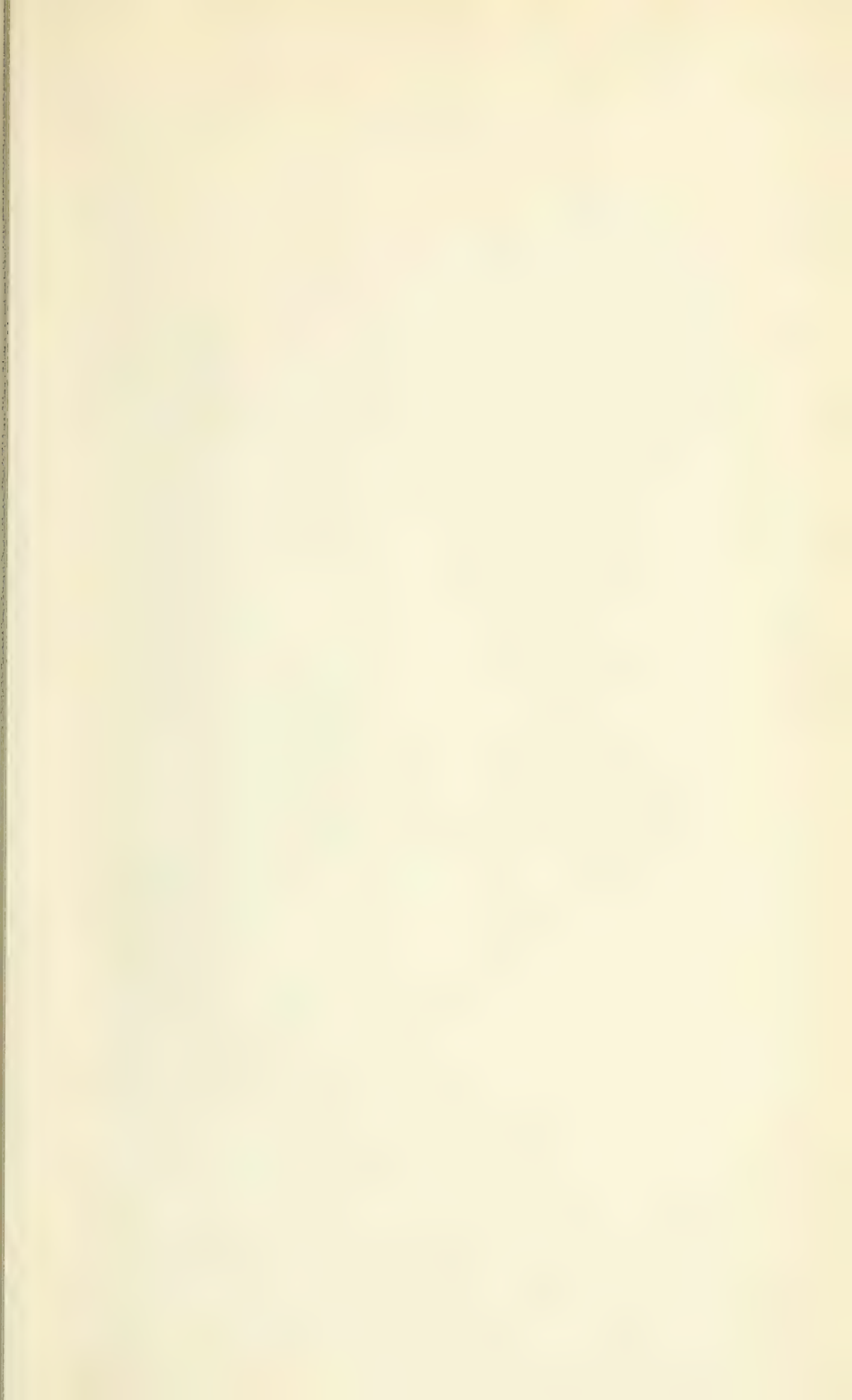
opinion was that death had resulted from suffocation due to the impaction of the false teeth. Notwithstanding this a post-mortem examination was ordered, and a medical gentleman other than the one who was called to the deceased was requested to make it. The post-mortem afforded evidence of death from suffocation, and an analysis of the contents of the stomach showed that it did not contain any poison. Not a particle of the evidence given at the inquest was contradicted, and to all ordinary minds the cause of death must have seemed certain. The coroner's jury, however, "drest in a little brief authority," thought fit to return the following verdict after a deliberation of half an hour's duration: "That the deceased died from suffocation, but that there has not been sufficient evidence brought before them to show how such suffocation was caused. The jury wish to add they consider Dr. Davies was guilty of an error in judgment in having taken the teeth from the deceased's throat without proper authority!"—*Lancet*.

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#### SHE DID NOT SWALLOW HER TEETH.

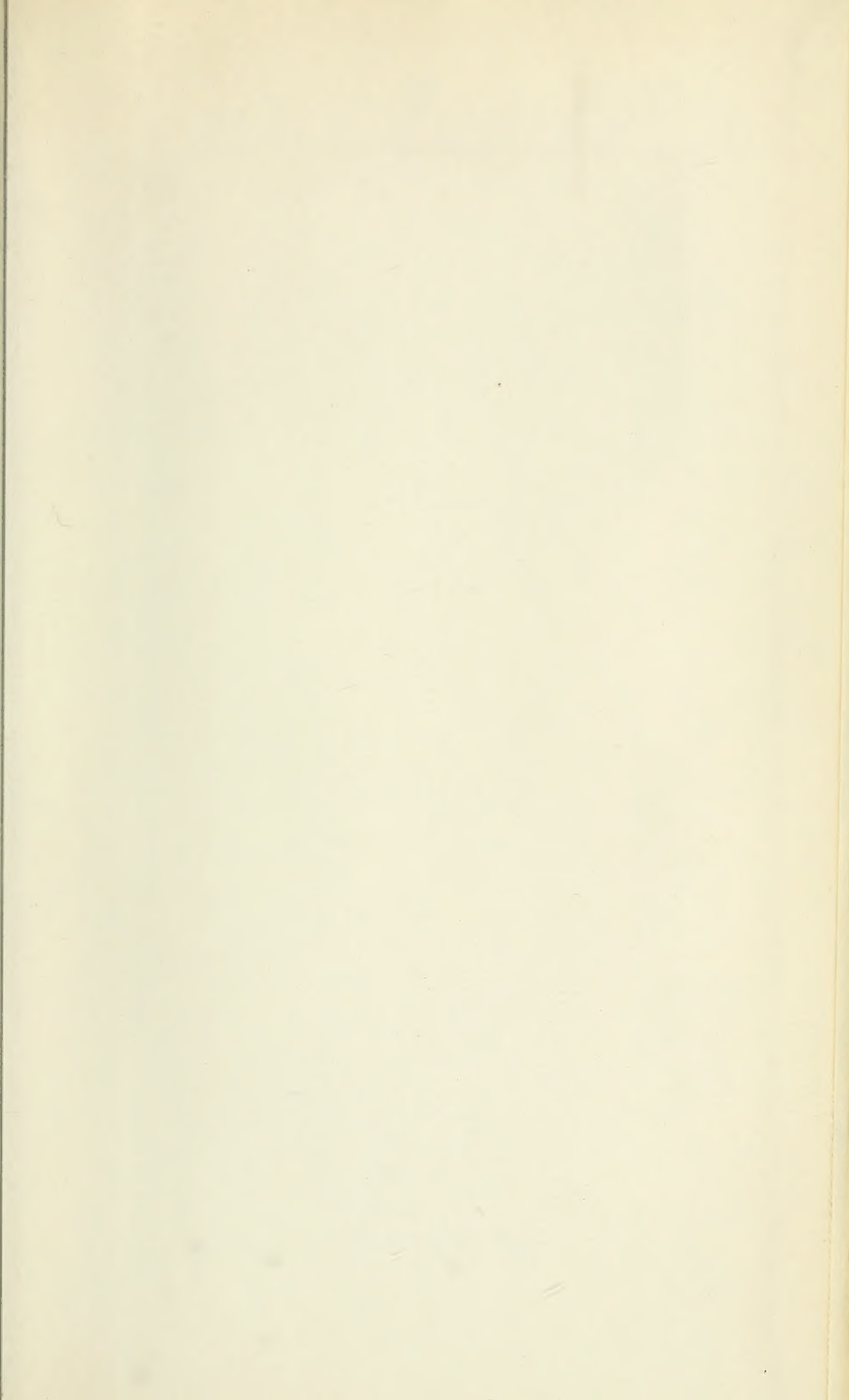
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THE following story appeared in the *New York Times*: A few nights ago, City Physician Myers, of Paterson, N. J., was called up about midnight to see a woman who was suffering the most excruciating agonies from having swallowed a set of false upper teeth, 16 in number. Several women were about her, who had been called in to help her. Anodynes were administered to relieve her temporarily, and then the physician closely scrutinized her mouth and throat, but could find no evidence of laceration. Moreover, she could swallow readily. He suggested that the teeth might have been mislaid, but this was indignantly scouted by the attendants, who declared that they had searched the house from top to bottom. A further search under the pillow failed to disclose the missing property, and the case began to look serious, as the poor woman declared that she could not stand it any longer, as she felt the edge of the teeth cutting into the sides of her stomach. Finally, at the suggestion of the Doctor, the inside of one of the pillow-cases was examined, and there the teeth were found, perfectly safe and harmless. The patient, who had a moment before been suffering from the laceration of the teeth "against the edges of her stomach," recovered instantly, and the Doctor was promptly dismissed.









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